CHANGE SERVICE REQUESTED

December 14, 2007 Volume 29 Number 50 www.processor.com



Career Advice From The Experts

Keep A Career From Going Stale & Create A Vision Of Where You Want To Go

by Elizabeth Millard

IN THE MIDST of solving user support issues, implementing network security, and keeping certifications fresh, it can be tough to think of a personal career track. For many, it seems that they land in a job and work to broaden their employer's technology power but tend to put their own career strategy on hold.

Making sure that a career path is well-groomed doesn't take much time, fortunately, and sometimes it only requires minimal effort. Just staying aware of how shifts in responsibility and contact lists can be important often goes a long way. Here are some tips from the experts for keeping a career from staying on the back burner.

Have A Personal Vision Of Where You Want To Go

Research has shown that when people focus their natural abilities and follow a strategic plan based on specific goals, they



are 10 times more likely to achieve that vision, according to Steve Bohler, founder and head career coach of the Oxford

Program, a career program geared toward IT professionals.

"Nobody cares as much about your career vision and success as you," he says.

"Therefore, you need to tend to it like a child, with attention and planning." He suggests creating a formal professional development plan that includes steps on the type of actions that would be required to get to a different, higher position. Include this plan as part of each performance review, Bohler notes.

Develop An Extensive Network

It's standard advice for professionals in any industry: Network, network, network. Those in the IT field can do this by joining industry associations and professional groups and also by finding a mentor, Bohler says. "That person's wisdom, and possibly contacts, can help pave a path to your vision," he says. "If possible, choose a mentor whose job level you're shooting for. Higher-level data

center management can become great supporters when you need their help."

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Data Loss Prevention In The SME

The Importance Of Protecting Your Data Center's Information

by Robyn Weisman

IF YOU'VE BEEN IN IT for more than a day, you probably have heard, read, and grasped that your organization's digital data is at least as important as the gold in Fort Knox and requires the same level of protection.

But in truth, your DLP (short for Data Loss Prevention) solutions need to be even more comprehensive than those for gold.

It is no longer enough to implement asymmetric algorithmic key lengths and firewall protection, which are the digital equivalent of armed guards and secure vaults for the

It is no longer enough to implement asymmetric algorithmic key lengths and firewall protection.

aforementioned precious metal. Unlike gold, data can be moved, altered, or corrupted—something you do not want to discover when your legal counsel is in the midst of e-discovery, for example.

George Clooney & Data Security

Gregg Pugmire, executive vice president of business development at storage solutions provider Nexsan Technologies (www.nexsan.com), says that when thinking about DLP solutions, you need to consider ways to protect your data from changes or corruptions and have the capacity to know immediately who is accessing your data, even if those who are doing so are just looking at it.

"When George Clooney had his motorcycle accident, the hospital treating him wanted

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Development on 802.11n started in early 2004, and after years of fits and starts, the standard's second draft received final approval in March. Interest in 11n has been keen due to promises of substantial throughput improvements.

■ A10 Networks announced a new 2.2 version

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upgrade to its ID series of network identity management appliances, including the IDsentrie and IDaccess. ■ BlueArc launched the newest product in its Titan family of storage appliances, the Titan 1100 storage system. ■ Check Point announced the UTM-1 Total Security appliances, which address the network security and threat management concerns of medium-sized enterprises. Cyber Switching is targeting its new PM8 Power Manager Series of intelligent power management devices at businesses that want to monitor, plan. and provision their building's electricity consumption. ■ Version 4 of GFI EndPointSecurity is now available from GFI Software.

iOstor announced the iQ2850 iSCSI storage system designed to deliver automated IP SAN solutions. ■ Radware announced Radware Application Performance Monitoring, an integrated solution to help find the source of performance issues. ■ SafeNet is targeting its new IPsec security package at carriers that offer multimedia services to mobile devices.

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STORAGE December 14, 2007

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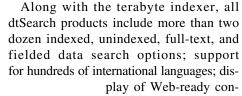
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| Test |

With IT Service Reporter, you can easily define detailed reports pertinent to different audiences, annotate reports, and even include your company logo for more a more polished, professional look.

glance, revealing opportunities for improved efficiency to management. You can show which systems are at risk for performance issues. Use workload analysis features to analyze and report how much of each server resource is being consumed by each IT service, business process, department, or application. Or use IT Resources to analyze and report the performance of IT services, combining performance data from multiple servers, applications, or other components.

Reports can be accessed over the network or from a browser, so you can access data anywhere. A simple drag-and-drop interface lets you define reports. And you can limit access to reports that include only the performance information appropriate for a particular user.

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tomized management reports to show service delivery efficiency; report IT service performance relative to agreed-upon service levels; and improve communication by including informative text on reports.

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NEWS



Motorola's CTO Leaves. **Becomes CTO At Cisco**

PADMASREE WARRIOR, who resigned as CTO at Motorola just days after the company announced the departure of its CEO Ed Zander, has taken a similar position at Cisco. Warrior will report to Cisco Chairman and CEO John Chambers and will work to explore new business and technology directions for the networking company. "Cisco's customer-centric culture and purposeful commitment to innovation are integral parts of my leadership portfolio," Warrior says. Warrior had been Motorola's CTO since 2003; prior to that, she held several other positions at the company.

TJX Makes Data Breach Settlement Offer

IN A PROPOSED settlement agreement, TJX Companies would pay up to \$40.9 million to Visa card issuers affected by the company's computer breach that was disclosed earlier this year. Affected banks have until Dec. 19 to accept the offer. TJX has agreed to make payment to banks that accept the offer by the end of the month in return for an agreement by the banks that they will not sue the retailer as a result of the breach. According to court documents, as a result of a computer intrusion that was undetected for more than 18 months, TJX lost more than 94 million credit cards, which were mostly Visa payment cards.

Dell Revenue Up On Mobility Products

DELL'S REVENUE FOR the third quarter was up 9% compared to a year ago, due in large part to a 19% year-over-year jump in revenue in its mobility products. Shipments of mobile products, including notebooks, grew 25% compared to a year ago. Dell's third-quarter revenue equaled \$15.6 billion, and its operating income was \$829 million, or about 34 cents a share. The company also credited solid demand for enterprise products as part of the success in the third quarter. Revenue from servers and storage was up 8%, with shipments up 7%.

Q3 Worldwide Server Shipments Grow

TOTAL WORLDWIDE SERVER shipments for the third quarter topped 2.2 million units, up 8.7% over last year's third-quarter shipments, Gartner reported. Likewise, global server revenue for the quarter increased 2.6% year-over-year to total \$13.4 billion. Based on revenue figures, IBM continues to lead the global server market with 30.1% market share, followed by HP with 28.1% and Dell with 11.8%. However, HP leads the pack in worldwide server shipment figures, with 29.3% market share, followed by Dell with 21.8% and IBM with 14.4%. Gartner analysts said factors such as demand for more capacity and growth in emerging markets helped drive the growth for the quarter.

Forecast: Lower Software **Licensing Costs**

GARTNER BELIEVES software licensing costs are set to drop over the next 10 years. A number of trends are combining to make conditions favorable for the software licensing buyer as the trends drive prices lower, transform software delivery models, and decrease dependence on the major application vendors. Gartner points out seven major trends that will contribute to the lower costs, including software as a service, business process outsourcing, and the increasing popularity of open-source options. Gartner also expects open-source software to put pressure on traditional software margin structures and predicts that by 2011, software as a service will deliver 25% of all new business software.

■ IBM Suing Battery Maker

IBM HAS FILED SUIT against a New Yorkbased company that has allegedly sold fake IBM batteries. The suit was filed Nov. 20 in the U.S. District Court for the Northern District of Ohio against online retailer Shentech; it asks for Shentech to turn over all the batteries in question and return the profits made on the fake IBM batteries, as well as unspecified damages. IBM was first made aware of the fake batteries when an Ohio customer purchased a battery from Shentech for a Thinkpad notebook. The battery reportedly caught fire; IBM investigated and found the battery and others it purchased from Shentech were not genuine IBM equipment.

Tech Data Posts Quarterly Financials

IT DISTRIBUTOR Tech Data recently posted its third-quarter financials, revealing profits that have quadrupled since the same quarter last year. Q3 profits were \$40.9 million, or 73 cents per share, compared to \$9.6 million, or 18 cents per share, a year ago. A restructuring charge last year decreased the company's earnings by \$6.1 million, in addition to a \$2.8 million consulting fee for restructuring the company performed in its European operations. Tech Data reported third-quarter revenue of \$5.92 billion, up 9% from \$5.43 billion during the same period last year.

This information provides a quick glimpse of current and historical stock prices and trends for 15 major companies in the technology market.

Company	Symbol	Year Ago	Nov. 28 \$	Dec. 5 \$	% change from previous week
BEA Systems	BEAS	\$12.78	\$16.06	\$15.80	▼ 1.62%
Computer Associates	CA	\$22.43	\$24.92	\$25.60	▲ 2.73%
Cisco Systems	CSCO	\$27.11	\$28.05	\$27.48	▼ 2.03%
Dell	DELL	\$26.73	\$27.69	\$24.31	▼ 12.21%
Electronic Data Systems	EDS	\$26.92	\$20.37	\$21.38	4 .96%
Google	GOOG	\$483.93	\$692.26	\$698.51	▲ 0.9%
HP	HPQ	\$40.01	\$50.73	\$51.66	▲ 1.83%
IBM	IBM	\$93.64	\$107.37	\$108.16	▲ 0.74%
Intel	INTC	\$20.70	\$26.19	\$27.22	▲ 3.93%
McAfee	MFE	\$29.17	\$39.32	\$38.57	▼ 1.91%
Microsoft	MSFT	\$29.54	\$33.70	\$34.15	▲ 1.34%
Oracle	ORCL	\$18.07	\$20.51	\$21.22	▲ 3.46%
Red Hat Software	RHT	\$16.22	\$19.56	\$20.03	▲ 2.4%
Sun Microsystems	JAVAD	\$5.73	\$20.86	\$20.55	▼ 1.49%
Symantec	SYMC	\$20.41	\$18.22	\$17.90	▼ 1.76%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions

McAfee Report Identifies Trends For 2008

A NEW CLASS OF criminals is using the Internet in new, systematic, and professional ways to commit illegal acts, according to the first Virtual Criminology Report McAfee issued. Among other findings: National security faces a growing threat from advancements in Web espionage tactics, often run by well-funded and wellorganized groups; online services are expected to battle increasingly sophisticated attack techniques; and a software flaw market is being developed and can be used to carry out espionage and attacks. The report says viruses are the most costly form of Internet crime for businesses. The complete report is available at www.mcafee.com.

EU Wants More Info On IBM's Purchase Of Telelogic

THE EUROPEAN COMMISSION'S original deadline of Feb. 20 to conclude its investigation into IBM's planned purchase of Telelogic will be extended. The Commission has been investigating whether IBM's proposed acquisition of Swedish software maker Telelogic for \$745 million would break competition rules set by the European Union. After initially deciding the acquisition would cause problems with competition in the industry, the Commission began an investigation. Now the group is saying that it needs more information to reach a conclusion. A new deadline will be set after the Commission receives all of the requested information.

Intel Suit Over Chip Speeds **Pushed Back**

A LAWSUIT THAT was originally filed against Intel by Barbara's Sales and others in 2002 in the Illinois District Court in Madison County will be heard by the appeals court as an individual action. An earlier ruling by the appeals court saying the case could proceed as a class-action suit was reversed by the Illinois Supreme Court because the California and Illinois laws on which the suit was based conflict, according to the judge. As a result, the case will proceed in Illinois only. According to court documents, the plaintiffs allege that Intel's Pentium 4 processor, which was released in 2000, didn't perform as represented by Intel.

Google Gets Extension In Patent Lawsuit

GOOGLE HAS received the extension it requested in the lawsuit that Boston-based Northeastern University and Jarg, a firm that develops distributed search technologies, brought against it last month. The university and Jarg claim Google has infringed on patented technology by using the distributed database technology that Kenneth Baclawski, a professor at the university and a co-founder of Jarg, developed. Defendants in cases such as this usually have three weeks to reply, but Google asked that it be given an extension until Jan. 11, and as neither Jarg nor the university protested the request, the extension was approved.

Senator Questions Federal Agencies **Hiring H-1B Workers**

SENATOR CHUCK GRASSLEY (R-Iowa) sent letters to the NIH (National Institutes of Health) and the Federal National Mortgage Association, aka Fannie Mae, to question their hiring of so many foreign workers with H-1B visas. The NIH "hired or otherwise employed" 322 workers with H-1B visas, and Fannie Mae's H-1B employees totaled 141 during the fiscal 2006 year. Grassley asked for details on strategies the agencies used to find American employees before filling the positions with H-1B workers. The agencies were among the top 200 users of H-1B workers for fiscal 2006.

Upcoming IT Events

- JANUARY -

Storage Visions 2008 Conference January 5-6 Las Vegas, Nev. www.storagevisions.com

. Florida Educational Technology Conference January 22-25

Orlando, Fla. www.fetc.org

WCA International Symposium & Business Expo

January 29-Feb. 1 San Jose, Calif. www.wcai.com

- FEBRUARY -

SCALE 6x - 2008 Southern California Linux Expo February 8-10 Los Angeles, Calif. www.socallinuxexpo.org

. Comptel Plus Spring 2008 Convention & Expo

> February 24-27 Nashville. Tenn. www.comptel.org

- MARCH -

Gartner Wireless & Mobile Summit March 3-5 Chicago, III. www.gartner.com/it/summits/ra11/index.jsp

> Secure IT Conference

March 4-6 San Diego, Calif. www.secureitconf.com

Help Desk Institute Conference

March 9-12 Dallas, Texas www.thinkhdi.com/hdi2008 VoiceCon

March 17-20

Orlando, Fla. www.voicecon.com

Boston SecureWorld Expo March 26-27 Boston, Mass. www.secureworldexpo.com

> **Data Center World** March 30-April 3 Las Vegas, Nev. www.afcom.com

-APRIL -**FOSE** April 1-3 Washington, D.C.

Gartner Business Intelligence Summit April 1-3 Chicago, III.

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SIX QUICK TIPS

Strategies To Make Your Help Desk More Efficient

by Joe Rudich

In Many small to Medium-sized enterprises, a help desk is the face of the IT department. Users receive information about new systems and procedures from support agents, both formally and informally. Even if other communications have been attempted, verbal notification from the help desk may be the only communication to which users pay attention. Of course, the flow of information in the opposite direction, from end user to help desk staff, is just as vital, as calls to the help desk may provide the best direct feedback to developers, system administrators, and other IT staff.

Keeping the help desk operating efficiently is vital, but it's not always easy. HDAs (help desk agents) face pressure from all sides and sometimes struggle to function at a highly effective level. We asked several IT consultants and members of the organization Help Desk International to offer suggestions to improve the efficiency of any help desk.

Train & Empower Help Desk Agents

"Complacency is the biggest challenge we face today," says Technical Support Manager Drew L. Jaehnig of the Defense Information Systems Agency (www.disa.mil). "Education and an infusion of According to Jaehnig, "The single most cost-effective improvement in our organization was having the right skill sets so we could reduce our overall staffing levels. Training may seem costly, but your return on higher-skilled individuals is released in higher morale (no deadweight for the team

"Empowerment is a huge tool and infuses team members with enthusiasm for what they do. Trust and empower help desk agents—you need it, they want it, and it costs nothing."

- Defense Information Systems Agency's Drew L. Jaehnig

enthusiasm for change are the best ways to overcome that challenge. Make training a priority and be sure that the team understands the importance of their role."

to carry), faster incident resolution, and a significant reduction in the amount of billable hours."

"Empowerment is a huge tool and infuses team members with enthusiasm for what they do," Jaehnig says. "Trust and empower help desk agents—you need it, they want it, and it costs nothing."

Most Cost-Effective Tip:

Fully Deploy Remote Tools

O Many organizations have invested in software intended to assist support personnel, including their help desk, to reach throughout their environment. A problem in many cases, however, is that these tools have been procured but are not fully usable. Mark Fitzgerald, user support manager at Boise State University, says, "Full deployment of remote management tools is one of the most cost-effective ways to improve a help desk. By this, I am talking about remote control, patch

management, software distribution, and tools for uniform imaging of workstations."

He says, "These products allow you to become proactive, design a better product, and provide more effective and more complete support.

Most help desks have these tools but still end up doing things in a manual fashion. As a result of not taking the time to learn and improve, expensive tools go under-utilized."

BEST TIP:

Build A Wiki

O Help desk managers repeatedly cite the ever-growing scope of information that representatives must be aware of, and especially the difficulty of organizing it. There are numerous suggested tools for this, including some software systems designed specifically for help desk knowledge management. Fitzgerald says, "The greatest challenge is complexity and diversity of technology. It is now infused in every aspect of the business, and it is all interconnected. You need a suite of tools such as knowledgebases or wikis, all of which help in organizing the technology."

Creation of a wiki is an excellent means for collecting the kind of information—diverse, scattered in different sources, and voluminous—that help desks face. A wiki is a shared database consisting of links to Web sites and documents, in the form made popular by the online encyclopedia Wikipedia. Because almost every help desk agent will already know the format of a wiki, building one is usually a popular cooperative process. Little or no training is needed for wiki users, and a number of design and publishing packages are available, some as open-source tools.

Focus On Root Cause Analysis

Mark Fitzgerald, user support manager at Boise State University, cites "root cause analysis or problem management" as a serious issue impacting the effectiveness of help desks.

"Managers need to focus on getting the routine out of the way in order to free up resources to work on actual improvement," says Fitzgerald. "Assign staff as problem managers who can step back and take an enterprise view. Often, these managers can determine that multiple incidents which seem to be independent are actually part of a larger issue with a common root cause."

Use A Service Catalog

Several service managers recommend the creation, or use, of an information technology service catalog. "For help desk improvement, I start with a service catalog," says Fitzgerald. "If I do not know what is in my environment, cannot call the technology by an agreed-upon name, and cannot categorize the technology, everything else becomes nearly impossible to deal with."

The service catalog is primarily a method to describe and sell IT services to users, but

RONLIS TIPS

HDAs can teach users to be self-reliant.

"HDAs [help desk agents] shouldn't allow themselves to become a crutch," says Paul Chin, an IT consultant. "If a user has a simple problem that they can rectify themselves, teach them how to do it so that, should it occur again in the future, they can fix it themselves rather than call the help desk repeatedly with the same problem."

Encourage HDAs to keep moving. Chin says it's OK for HDAs to answer one question and move on instead of helping one user with multiple unrelated issues for an extended period of time. "When a helpful HDA solves a user's problem, the user will be tempted to ask completely unrelated questions," he notes. "If HDAs allow themselves to be taken advantage of, their work may suffer since other users will have to wait longer for them to make their rounds."

it can be highly valuable to a help desk. Ray Schutte, former IT director of Starbucks who implemented a service catalog for the coffee retailer in 2002, agrees. Schutte says, "Your job is to keep yourself and your IT department competitive. One of the biggest mistakes is thinking someone else will manage it for you."

Teach Agents How To Interact With Users

More than problem-tracking tools, information distribution software, or any tool or system, effective help desk agents create an effective help desk. Paul Chin, an IT consultant who has worked with IT managers in the aerospace and competitive intelligence industries, offers suggestions for agents to interact with users in a way that will be most effective. First, says Chin, help desk agents should treat users as equals. Chin says, "Never be condescending to users. If HDAs talk down to users, it will simply polarize the help desk and its users."

Chin also suggests reminding HDAs not to take things too personally. "Every HDA, at one time or another, will have to deal with angry or abusive users. It's important for HDAs not to allow these interactions to get them down or to take them as a personal attack," he notes. In addition, he says lightening the mood can help users feel more comfortable with the process. Chin says, "Making lighthearted (but still professional) conversation with users can help ease their stress, but HDAs shouldn't do it in a manner that makes it seem as though they're not taking the situation seriously."

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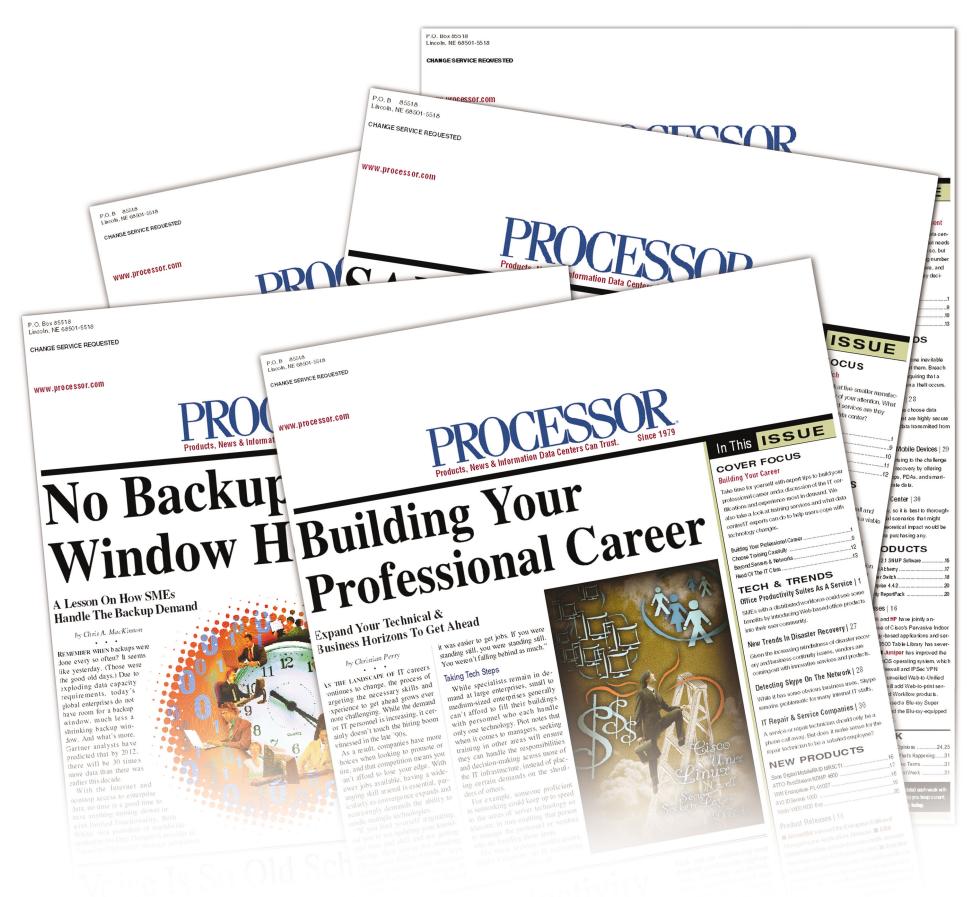
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Skill Search

Experts Identify The Top IT Skills Today's SMEs Seek

by Christian Perry

WHEN IT COMES TO HIRING, there's no secret formula when seeking skills for a particular IT need. But challenges arise when managers attempt to predict what they'll need in the near future, particularly in data centers at small to midsized enter-

prises, where IT workers often wear multiple hats.

Determining precisely which IT skills are hot now and will be in the months to come can be a valuable tool in planning for the overall shape and scope of an IT enterprise. This value will likely increase next year, as research suggests that hiring is on the uptick.

A survey that NFI Research conducted revealed that during the next 12 months, 60% of small businesses (those with fewer than 500 employees) expect to see an increase in employment, whereas only 32% of the enterprises with 10,000 or more employees expect an increase in hiring.

Jack Of All Trades

Whereas larger enterprises typically have the luxury of filling specific

positions to address discrete technologies, SMEs don't usually have the budget to accommodate such flexibility. Lance Geeck, IT manager at Kettley Publishing (www.kettley.com), says that the IT department staff at SMEs needs to be varied in its skill sets.

"IT managers in this arena need to have skills that encompass security, wireless technology, network management, desktop, internal and external Web setup, systems maintenance, purchasing, project management, quality assurance, and strong customer support attitude," Geeck says. "In addition, they must have superior troubleshooting skills that allow them to solve problems that may not be in their realm of expertise."

However, this do-it-all skills approach doesn't necessarily apply to programming. Geeck says that IT is evolving much like the medical profession did in the early 1900s, when doctors did everything for their patients. Today, the medical profession is very specialized, and parts of the IT industry are following the same path as systems become more complex.

"In the '80s and early '90s, a small company could always find a programmer that



could also manage the network and handle PC problems. Complexity has increased, and the knowledge required to be a programmer has increased to the point where they don't have the time to be knowledgeable in both areas," Geeck says.

Matt Henderson, director of project and professional services at Ensynch (www ensynch.com), which provides data center managed services and IT infrastructure services and staffing, says that it is becoming increasingly important for enterprises to ensure that products—of the same manufacturer or different manufacturers—can efficiently communicate with each other and exchange data. Doing so will require companies to place an emphasis on specific programming skills.

"As technologies such as identity management, single sign-on, and reporting become more ubiquitous in the enterprise,

companies are going to require aggregation of data in order to report and/or make better business decisions," Henderson says. "Connecting these disparate products will require a fair amount of programming skills, especially in the .NET, SQL, and C# areas."

Security Focus

Nobody's surprised when experts point to security as a leading skill that enterprises of all sizes are seeking. But SMEs can't simply open up the coffers and buy a crowd of security-minded personnel to address all potential threats. Henderson says that security is currently a hot skill and will stay that way and that companies are seeking individuals who can examine

the technical landscape as a whole and apply the security principles of confidentiality, integrity, and availability.

"Though security is viewed as critical, it has often been overlooked or pushed aside due to the 'It won't happen to me' syndrome. We are just now seeing where a majority of IT decision makers are budgeting for and addressing security concerns from a software, hardware, and services perspective," Henderson says.

Getting SaaSy

SaaS, or software as a service, was one of the most well-traveled buzz terms this year, and experts predict its continuing popularity will translate into hires. John DeBenedette, vice president of information technology for INTTRA

(www.inttra.com), a firm that offers ecommerce tools to ocean carriers and their customers, says that for the average business, the CIO and IT staff will become buyers, managers, and integrators of SaaS.

"More enterprises will transition from investing in developing in-house software and hardware to the SaaS approach—at which point the larger and longer-term impact on traditional IT will become clear. For example, SaaS has the potential to reduce the IT staff's and CIO's roles to integrator and manager, at best, for those companies whose primary role is not software development," DeBenedette says.

This move toward SaaS will impact the skills desired in the CIO role, he says. The CIO's role used to be enterprisecentric, focused on supporting the internal network and business operations, promoting IT innovation, reducing costs, and

Identify Strategic Technologies

Gauging necessary skills in future hires can help IT managers shape their existing environments. Research company Gartner has identified the top 10 strategic technologies for next year, defining "strategic technology" as one with the potential for "significant impact on the enterprise in the next three years."

- Green IT
- · Unified communications
- · Business process modeling
- Metadata management
- Virtualization 2.0
- Mashup and composite apps
- Web platform and WOA (Web-oriented architecture)
- Computing fabric
- Real-world Web
- · Social software

driving efficiency. But, notes DeBenedette, at on-demand platform companies, where the business strategy is intertwined with the technology base, the CIO will be charged with supporting the technology infrastructure of the core enterprise while getting deeply involved in the development of a business plan for SaaS products and services.

Plan For Planning

Michael Helms, director of product management at Avocent SMB Solutions (www.avocent.com), explains that in the future, the primary skill SMEs should demand is the ability to develop an IT plan. "We often hear from our IT customers in smaller businesses that they are so busy reacting to demands created by the business objectives that they don't have time to develop a master plan," Helms says. "But a plan doesn't have to be overwhelming to produce. Even an outline that is well-communicated internally can improve results."

As for current hot skills, they will remain dependent on the success of their core technologies. For example, Ensynch's Henderson says that the proliferation of Microsoft (www.microsoft.com) products will ensure that .NET and SQL skills remain in demand.

"It is all a big cycle," Helms says. "Technology impacts business, and business impacts technology. Most businesses have a Web presence, whether it is to provide information, provide service, or sell products. Understanding how the Internet impacts how we all do business is critical. That, in turn, impacts what IT environment must be created."

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IT Getting Down To Business

Admins Should Hone Their Skills To Boost Their SMEs' Bottom Lines

by Bruce Gain

LONG GONE ARE THE DAYS when the IT department operated as a standalone entity. IT's core function may still revolve around maintaining an enterprise's data center and network, but admins are now increasingly expected to hone their skill sets to further the enterprise's business goals, as well. Some companies may demand that their admins justify their positions by demonstrating how they directly create ROI and revenue opportunities.

"In today's environment, IT professionals have to understand how technology fits into the overall business," says Susan Snedaker, principal consultant and founder of VirtualTeam Consulting (www.virtual team.com). "It's not enough to implement an inventory management system; it must help drive productivity gains, cost reductions, or increased profits."

Build Business Acumen

Ensuring that your skills and mindset are in tune with the business needs of your company does not necessarily mean that you must drop any plans for IT training and immediately enroll in business classes instead. Gathering business acumen can start by establishing a better dialogue with

Acquiring Business Skills

Several options exist for adding business acumen to your skill set as a full-time administrator. Both formal and informal channels offer knowledge about how to ensure that what you do will boost your SME's bottom line. Ways to improve your understanding of your company's business dynamics include:

- Gathering information by interviewing managers and colleagues about how the IT department can better help them achieve their goals
- Gaining an in-depth understanding of what drives your enterprise's profits and revenues, which may include information about customer relationships, products and services, pricing, procurement, or other variables that directly affect the health of the enterprise
- Taking formal training at a university or established training outlet for a theoretical and big-picture understanding of how business works

colleagues from different departments and with general business executives about what their needs are and how IT can facilitate their goals.

"By far the easiest and most effective step to take is to talk with other managers within the organization. Ask them about their perspective on the business, what their priorities are, what they find most challenging, what they wish could be done differently, etc.," says Snedaker. "This not only helps the IT manager become more knowledgeable about other aspects of the business, it builds relationships with key staff across the organization. Understanding what drives other departments and what their concerns are will

help the IT manager begin to understand the business in a more holistic manner."

Taking business classes at a local university, community college, or a reputable online training outlet doesn't hurt, though. "[Business classes] can provide an excellent environment in which IT managers can begin to understand the larger business world and how business decisions are made. Courses in general business, management, finance, and economics, for example, can provide the foundation for a better understanding of how business operates," Snedaker notes. "The concepts learned in these courses have to be compared to how the IT manager's specific company operates because he or she will quickly see that rarely does a business operate in textbook perfection."

Ultimately, an admin must have more than just a basic understanding of his enterprise's goals, missions, and operations. The admin must instead be intimately acquainted with how his business works, says Bart Bolton, a facilitator for the Society of Information Management (www.simnet.org). "How many IT people really understand how pricing gets set, how [one determines] who the competition is, or how to deal with customers?" says Bolton. "When IT people get exposed to the outside world of the company, it is a different world, and they really need [that exposure]."

IT Business Of The Future

As demand for admins' business skills is expected to increase during the next few



years, admins with managerial aspirations should strongly consider demonstrating their business, as well as IT, acumen. For admins who want to become a CTO or CIO one day, a strong grounding in business will increasingly become an essential prerequisite.

"The growing trend is toward hiring CIOs that have technical and business backgrounds," Snedaker says. "A CIO can no longer view IT as a separate entity, nor can IT be treated as just a utility function."

Staffers will also see the effects of CIOs with business backgrounds as they implement IT strategies that are more in tune with bottom-line goals of the company.

"IT, in itself, does not drive competitive advantage, but how IT is implemented and managed often does create a strategic advantage," Snedaker says. "So the CIO (or the IT manager) needs to understand where the company is headed and what it's trying to accomplish so he or she can implement the right technologies to enable or enhance the company's vision."

At the same time, those without an IT background from different business departments are expected to assume responsibilities for certain IT functions. As enrollments in IT-related fields of study may continue to decrease, for example, requirements for IT-educated people may decrease or IT managers may have non-IT educations, says Michael

O'Neil, an independent IT consultant and co-founder and CEO of the social media site IT In Canada (www.itincanada.ca).

"Our need for IT specialists—particularly those with fairly low-level skills—will decrease as the people around them demonstrate higher basic capabilities. This is inevitable over time, as the proportion of workers who grew up using PCs rises from 0% in the early 1980s to 100% by 2025 or so," O'Neil says. "At the same time, I think you'll find that management of IT functions and projects will increasingly be handled outside of the IT department. So 'IT managers' may well come from non-IT backgrounds, but they may also be working in non-IT departments."

Technologists Need Apply

Some admins may not be interested in business to begin with and will find the encroaching demands of marketing, finance, and other non-IT departments daunting. Many admins, for example, may have entered the field out of a love for technology, thinking that business-related issues would never fall within their sphere of responsibilities. For those uncomfortable with the idea of having to acquire business-related skill sets and responsibilities, enterprises will always need skilled technicians. Talented SQL server experts or C++ programmers should be able to spend their time doing what they like without having to bother themselves with business strategy meetings.

On a high level, there will always be opportunities for those who remain grounded in the world of technology, who know how to apply what they do so it will ultimately boost the firm's bottom line.

"There is more of a need for technologists instead of a technician so their skills overlap with business goals," says Bart Bolton, a facilitator for the Society of Information Management (www.simnet.org). "There is a requirement for a higher level of understanding of technology, not just of the bits and bytes, but its business impact."

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IT Certifications In Demand

What Credentials Are Hottest Right Now?

by Sandra Kay Miller

ACCORDING TO A 2007 Robert Half survey of more than 1,400 CIOs from American companies with more than 100 employees, the top five IT skills in demand are Windows administration, network adminis-

tration, database management, firewall administration, and wireless network management. The Bureau of Labor Statistics estimates that more than a million new IT jobs will be created by 2014. However, UCLA's Higher Education Research Institute reports a 70% drop in computer science majors between 2000 and 2005.

While many enterprises jockey for recent technology graduates from colleges and universities, others have relied heavily on targeted professional certifications as a metric for potential new employees. Experienced technology professionals often use technology certifications to advance their careers without investing time and money to obtain an advanced degree. Additionally, organizations are choosing to foot the bill for their existing

staff's certifications to increase employee retention while reaping the benefits of a better-educated IT staff.

Eddie Zeitler, executive director at (ISC)², a globally recognized standard for certifying information security professionals based on the strict criteria of a globally recognized benchmark (ANSI/ISO/IEC Standard 17024), has also witnessed senior executives, such as CIOs and CISOs, adding a professional security certification to their resume. He says, "As senior management becomes more aware of security issues, there's a strong demand for certified players."

Just about every IT vendor and discipline has some sort of professional certification. Boot camps, IT training centers, and independent certification bodies, such as (ISC)² and the Wi-Fi Alliance, also provide certificate programs for core disciplines.

Zeitler explains the different types of certifications and why both are necessary: "Someone who has to work only on a specific product, like a firewall, needs to have specific training on that box, model, version, etc. That's valuable. But to frame the security policy for a corporation, to talk

about information assurance across the board with auditors, regulators, and compliance officers, you need a more senior person with a good strong grounding in information security."

But many IT professionals question spending the money and time obtaining professional certifications in such a dynamic industry. Nancy Freelan, an enterprise IT recruiter for the last 18 years, explains the importance of certifications: "It gets your



foot in the door." While many of the organizations hiring Freelan do not require certifications, she uses it as a method to identify potential employees who have a commitment to their profession.

Popular Choices

Since the introduction of the MCSE (Microsoft Certified Systems Engineer) certification 14 years ago, it has been the top-ranking professional certification. Recently, Microsoft (www.microsoft.com) has overhauled its certification program. The model is composed of three series (technology, professional, and architect) and four credentials (Microsoft Certified Support Technician, Microsoft Certified IT Professional, Microsoft Certified Professional Developer, and Microsoft Certified Architect). Microsoft's aim is to provide standards through which IT managers are able to qualify and validate core technical, professional, and architectural skills.

Following the lead of newer oversight bodies that developed more stringent testing criteria to alleviate "professionals-onpaper," candidates for Microsoft's seniorlevel IT architect certification, MCA, must have a minimum of 10 years advanced IT industry experience and must appear before an oral board of industry peers.

Before there were Microsoft certifications, the de facto standard often offered in conjunction with university extension programs was the Certified Novell Engineer, or CNE, certification (www.novell.com). Today, NetWare remains popular with companies, educational institutions, and government agencies, so the demand for

trained Novell engineers and administrators continues to remain high.

With more data centers and IT departments integrating Linux into their infrastructure, IT professionals are also obtaining the Novell CLP (Certified Linux Professional) and CLE (Certified Linux Engineer).

"Any certification from Cisco puts a potential employee at the top of the pile," says Freelan. With more than 90% of Internet traffic through Cisco (www.cisco.com) routers and switches, the demand for trained professionals to maintain and troubleshoot networking equipment has ballooned.

Cisco offers multiple tiers of certifications—Associate, Professional, and Expert—within several disciplines, including Routing and Switching, Design, Security, Storage, and Voice, as well as

Specialist Certifications for Data Centers, IP Communications, VPNs, and Wireless LANs. Routing and Switching continues to be Cisco's most popular track, as it covers not only information about its products but also comprehensive information regarding network traffic, protocols, network interfaces, and access control lists.

The Big Picture

Freelan has also seen a sharp rise in resumes listing technology-specific certifications, such as those for databases, wireless installations, and IP communications.

Database giant Oracle (www.oracle.com) offers an extensive array of certifications from its Oracle University covering databases, middleware, applications, and Linux.

The professional certifications garnering the most interest from both IT professionals and employers focus on security. "Enterprises don't want to take chances when it comes to their security. If they are going to demand a certification for potential employees, it's usually for some type of security training," Freelan notes.

Due to the encompassing and holistic nature of security, enterprises want to see a nonvendor-specific certification, such as the CISSP (Certified Information Systems Security Professional) offered by (ISC)².

Similarly, emerging certifications for VoIP are following. With the growing popularity of IP-based communication, many organizations, such as Cisco, Avaya (www.avaya.com), IBM (www.ibm.com), and 3Com (www.3com.com) are turning to the CCNT (Certified in Convergent Network Technologies) certification to set the educational standards for emerging applications in converged telephony and data communication technologies.

The demand for certifications is constantly evolving along with new and maturing technologies. However, Freelan says, "Expe-rience will always trump certification."

"If I'm going to employ someone, I want to have some confidence as to their knowledge and skills. It just makes sense," says Zeitler. "We want people certified for their jobs."

The Major Categories Of Certifications

Discipline	Popular Certifications
Administration	 MCSE (Microsoft Certified Systems Engineer) Linux Certification Novell Professional Certification SCSA (Sun Certified System Administrator)
Database Management	 Oracle DBA (Database Administrator) OCP (Oracle Certified Professional) Lotus Professional Certification MCDBA (Microsoft Certified Database Administrator)
Networking	CCNA (Cisco Certified Network Associate)
Security	CISSP (Certified Information Systems Security Professional)
VoIP	CCNT (Certified in Convergent Network Technologies)

PHYSICAL INFRASTRUCTURE

October 26, 2007

A Master Enterprise View

New ATEN KVM Bundle Provides Perfect Features For Monitoring & Maintaining Servers & PCs

TODAY'S DATA CENTERS require convenient, space-saving, streamlined KVM equipment. ATEN's 17" Single-Rail LCD Integrated Console and MasterView KVM bundle is designed with those needs in mind.

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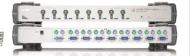
When finished, flip down the cover and slide the console module back into the rack.

By using the CL1000M to manage your installation, you save space; eliminate the expense of having to purchase a separate keyboard, monitor, and mouse for each PC if attaching to a KVM switch; and can take advantage of upgrading your current system

ATEN is now bundling the CL1000M with an eight-port MasterView Plus, which helps reduce the need for redundant hardware. With the MasterView Plus, you can control up to 512 computers with a single keyboard, monitor, and mouse. And it requires no software.

MasterView Plus is more than a simple eight-port KVM switch. A built-in Auto-Scan mode lets you monitor every attached computer for a specified amount of time, while the on-screen display lets you assign a

> unique name to each computer and access it via a slick, menu-driven interface. A Quick View Scan feature makes it easy to monitor selected PCs, and hot-pluggable



capabilities mean you can add or remove PCs for maintenance without powering down the switch. The MasterView's 1U, 19-inch rack-mountable casing and status-monitoring LEDs make it ideal for server rooms or other multicomputer environments.

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Career Advice From The Experts

Continued from Page 1

A career coach can also be helpful, says Andy Zaleta, a partner in the technology practice at executive search firm Battalia Winston. When choosing either a coach or mentor, look for someone who is a strategic and conceptual thinker, with a demonstrated track record, he notes. He or she should be able to provide exposure to business development, customer relationship skills, budgeting and forecast, resource planning, and exposure to global enterprises.

Broaden Your Focus

Although the need for more security or wireless technology has caused many in IT to become specialists, be sure to keep experience and skills wide-ranging, advises Michael Peters of executive search firm McKinley Group. "Get a broad range of experience across several different platforms," he says. That means understanding of the high-end processing environment, through midrange, Wintel servers, Unix servers, and PC desktop technologies. "Work up a game plan for cross training in all functions of the data center," he says.

Also vital for creating a wider skill set is to garner expertise in non-IT areas, adds Zaleta. Experts have been advising IT employees to learn how to communicate with other departments and put technology discussions into nontechnical language. But he believes that IT employees should go a step further and understand how IT is adding value to the business side of the company.

These areas include finance, HR, marketing, R&D, and other departments. Zaleta says, "Ultimately, IT pros who want to advance themselves need to become business partners with their non-IT counterparts, which includes seeing the big picture and not speaking in bits and bytes."

Consider How High You Want To Climb

If a professional development plan is geared toward a top management tier, it's likely that it's time to hit the books. Very few can move into those positions without a higher level of education, Peters notes, with a four-year degree as the bare minimum. "Be ready to move around and make several jumps in your career," he says. "You should have held positions on both the technical side,

as well as the application development side of IT. A strong financial understanding of business accounting is also highly desirable."

Examine Your Employer With A Critical Eye

An employer may be generous with vacation time and benefits, but is the firm the best fit when it comes to long-term prospects?

According to Brian Margarita, president of IT staffing and project development firm TalentFuse, "If the company you're working for isn't innovating, they'll either go out of business in the long term or lower their rates in the short term. Lower rates will lower your salary, and most importantly, they'll never be a target for acquisition by bigger companies."

Follow Your Passion

A career tip that seems as weathered as old-style mainframe equipment is to "do what you love, and the money will follow." Experts note that when someone is engaged in her work, other aspects of her life are also enhanced. Studies have shown that a stressed, unhappy employee is sick more often and has more long-term anxiety. So

Tips For Those On The Job Hunt

According to consultant and author C. David Gammel, here are some steps for standing out from the crowd while looking for a new job:

Write a tailored cover letter. Spend a few minutes researching the company and write a cover letter that incorporates some of that information. Mentioning specific responsibilities in the posted job and referring them to relevant sections of your resume is a great tactic, as well.

In your resume, write about outcomes you have achieved in addition to listing all of your technical qualifications. All the certifications in the world don't mean a thing if you can't apply them effectively.

Ask your interviewers about the top three issues on their plate right now. Ask follow-up questions about these issues. You don't have to solve these problems in the interview room, but asking questions will make the interviewers think you are very perceptive.

find what makes you excited to go to work and gravitate toward that direction. $\ \ \square$

Data Loss Prevention In The SME

Continued from Page 1

to find out who was leaking [Clooney's information and whereabouts] to the media, and it was able to do so because its system could see who had looked at [Clooney's information]," Pugmire says. Because the hospital's system had this capability, its IT people could narrow down those who accessed the information and determine which of them had improperly peeked at it.

Pugmire explains that the ability to prove the immutability of your data becomes critical during e-discovery. Traditionally, digital information has been afforded less weight than paper evidence, but given that communications have for the most part migrated to electronic forms, organizations need to be able to prove what has happened to such data since its creation. Indeed, firing two or three celebrity-obsessed employees tends to be a lot less expensive to an organization's reputation and bottom line than a potential lawsuit from an A-list actor.

Guessing Isn't Good Enough

Pugmire says that it is no longer good enough to guess where your data is located or use metadata to search for it. He explains that content-addressable storage technology, or CAS, enables users to stamp every file with a digital fingerprint so that you know the location or locations of a given file and whether it has been modified in any way. These fingerprints enable you to audit such goings-on quickly and often automatically.

According to Pugmire, CAS technology is processor-intensive, given that generating cryptographic algorithms for these finger-prints requires a lot of number crunching. But now that inexpensive servers typically sport multicore processing, SMEs can use this technology without ruining their budgets.

The Importance Of Involving Everyone

Nick Edwards, senior group product manager at IronPort Systems (www.ironport.com), an email and Web security solutions provider now owned by Cisco Systems (www.cisco.com), says that a comprehensive DLP solution requires a lot of different functional groups within your company to work together. "Otherwise you're going to have one group who's really passionate about it and making changes and other groups that may not have bought into the objective, and you're not going to have a holistic focus around DLP that allows the organization to make the appropriate steps across the entire network," Edwards says.

Edwards also stresses that when developing your DLP solution, you must spend time brainstorming and determining precisely what composes your DLP requirements. "For example, retail concerns may have a large percentage of employees who don't have an email account [and] don't have a broad base of users through email," Edwards says. "However, they have all this information dealing with payment cards, and they need to be secure and sensitive with that data and need capabilities like deep data encryption and antivirus solutions in place to protect this information."

Moreover, your solution needs to be seamless and intuitive with your network. "You want to do it in a way that allows administrators to simply deploy it, simply enforce policy, and simply remediate while at the same time not having a dramatic change to the end-user experience," Edwards says.

Some Best Practices

IronPort Systems (www.ironport.com) recently released a new report that recommends best practices for managing and protecting enterprise data. The new report includes six tips to follow when setting up a DLP (data loss prevention) system.

Take time to define your DLP needs. Before doing anything else, make sure you understand and log the types of sensitive data that your organization stores and the sorts of policies you need to monitor and enforce how the data is shared and protected from corruption. IronPort's Nick Edwards, senior group product manager, says it is particularly important to understand the requirements that impact your vertical. In other words, a financial institution is going to have different requirements for protection than a manufacturer.

Prioritize your DLP focus. A corollary to the above tip, focus initially on the weak links in your DLP policy. Areas that diminish your organization's brand and shareholder value should be attended to because these problems make it easier to justify solutions and get senior management onboard.

Ensure you implement effective, comprehensive coverage. According to IronPort, this coverage ought to include automatic enforcement of corporate encryption policies, multiprotocol monitoring and prevention, selective blocking or quarantining of messages, and granular analysis of all types of files and attachments.

Make your DLP solution inconspicuous. Find a scalable solution that can handle the ever-increas-

ing volume of data and bandwidth needs that does not impact effective communications.

Make sure your DLP solution provides effective reporting. Your solution must provide in-depth reports of suspected violations that include such information as the message sender, contents, attachments, intended recipients, and metadata of the violating content so that you can take action if necessary.

Combine best-of-breed solutions. Any DLP solution your organization chooses must be able to integrate with other best-of-breed solutions so that you have the flexibility and support to leverage future third-party solutions through data sharing and connectivity.

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The LB-4000E redefines the data centerlevel load balancing field by providing an unmatched functionality/price/performance ratio. It differentiates itself from the competition by operating at the data link network layer (Layer 2 inline/transparent operation) to manage synchronous or asynchronous telecommunication links. Elfiq Link LB implementation is simple and does not require IP address migration or changes to firewalls or routers. This prevents the use of complex protocols, such as Border Gateway Protocol, to support multiple links, and it reduces implementation projects.

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Link LB a key element of disaster recovery projects and ensure maximum availability to the enterprise's IP services regardless of the scenario or environment. Traffic will continue flowing between sites when a site goes down and geographic policies clarify what kind of traffic or IP service is allowed to use another site.

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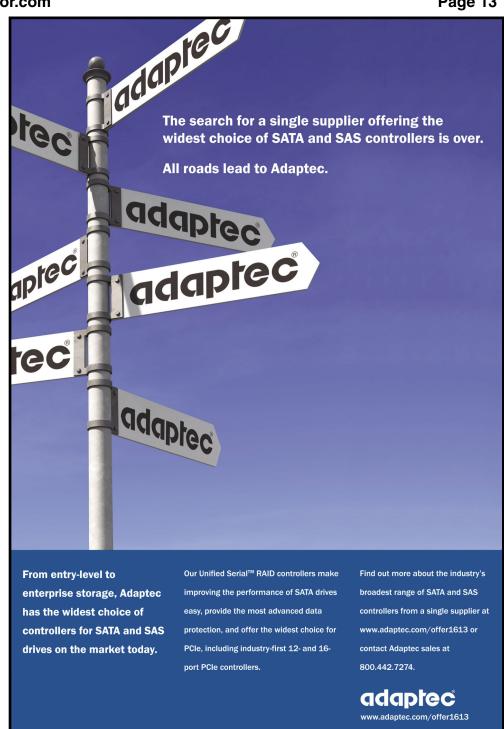
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Product Releases

CLIENTS

- Asure Software released Mobile Workforce Manager, a program designed to make the scheduling of flexible workspaces for mobile workers more efficient. Mobile Workforce Manager allows mobile workers to reserve workspaces while on the road, commonly referred to as "office hoteling." This helps organizations save money by streamlining the use of expensive workspace. Employees use Mobile Workforce Manager to book a predefined workspace before arriving at a given location, choosing workspaces from an imported floor plan, calendar, or list of available spaces.
- Novell announced the availability of SuSE Linux Enterprise Real Time 10, the latest version of Novell's enterprise-class, opensource, real-time operating system for running high-performance, time-sensitive, mission-critical applications. With SuSE Linux Enterprise Real Time 10, financial organizations can respond more rapidly to changing markets and new information, get greater application reliability and predictability, and identify and eliminate performance bottlenecks. With Novell's real-time technology, customers can segment portions of their processors for high-priority, mission-critical workloads, as well as ensure that other system processes and tasks do not interrupt them. Enhancements to SuSE Linux Enterprise Real Time 10 include the latest opensource technologies that reduce system latency or delay and improve predictability, such as CPU shielding, priority inheritance, sleeping spinlocks, interrupt threads, high-resolution timers, and the latest OpenFabrics Enterprise Distribution for commodity highspeed interconnects, OFED 1.2.5.
- Planar Systems announced availability of its Clarity RP and RX rear-projection displays, which are designed to deliver visual performance for control room environments, such as those in the government/military, broadcast, utility, and transportation fields. The displays are available in 50- and 67-inch sizes in open or integrated system options. Both lines include Texas Instruments' single-chip DLP and Planar's exclusive SiFi (Set It and Forget It) technology, which reduces the time and expertise required to balance a video wall. Additionally, SiFi Auto Color Balance can be started on-demand over a network or via remote control and automatically by schedule or event. Both lines also include a new capability to retain and factor in fine-grain, environment-driven adjustments made by technicians.

Planar Systems also announced the m40L and m46L, two commercial-grade directview LCDs for control room and digital signage applications. Both models offer built-in power management, an intelligent light sensor to automatically adjust the backlight, and a protective front faceplate. The m-Series displays are designed to withstand intense ambient conditions. The m40L is a 40-inch, WXGA monitor that features a 0.6-inch bezel and 700-nit brightness. The m46l is a 46-inch monitor with an ultra-HD 1080p resolution, and it features multisource compatibility that's suitable for broadcast master control rooms. Both models offer a 1,200:1 contrast ratio, 178-degree viewing angle, and landscape and portrait orientation.

■ Printronix protects sensitive data traveling over wireless networks with the new secure wireless connection option for its PrintNet Enterprise print management package. The option features support for WPA-PSK/TKIP (Wi-Fi Protected Access-Preshared Key/Temporal Key Integrity Protocol) and WPA2-PSK/AES CCMP (Counter Mode with Cipher Block Chaining Message

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Authentication Code Protocol) encryption protocols. It also has 128-bit WEP (Wired Equivalent Privacy) support. The 802.11b/g interface is integrated and available on SL5000r MP2 and SL4M MP2 RFID printers, as well as the T5000r and T4M Printronix barcode printers. The integrated radio card is \$799 for a factory-installed option and \$849 for the field retrofit.

■ Sony expanded its line of video projection systems for commercial applications with two new LCD models for larger venues. The VPL-FW300L (7,000 lumens) and the VPL-FH300L (6,000 lumens) projector models are designed to deliver outstanding images while in the same room as the audience. The VPL-FW300L projector has a WXGA+ resolution of 1,366 x 800, while the VPL-FH300L unit delivers resolution of 2,048 x 1,080. Both models sport the same chassis design and the same type of lenses, lamps, filters, connections, and network functions. The projectors feature Sony's BrightEra imaging technology, which offers increased brightness, resolution, and panel reliability. For easy installation and maintenance, the projectors' control panels are located on the sides.

■ Systemax released several notebooks, including the Medallion XV, Medallion XVII, Pursuit 4165, and Pursuit 4250. The Medallions come in both 15.4- and 17-inch models and with either Windows XP or Vista installed. The notebooks also come with 1.3MP digital cameras and have Nvidia GeForce 512MB discrete video cards, Bluetooth, stereo speakers, and subwoofers. Systemax's Pursuit models include 2MP cameras and biometric fingerprint readers. The notebooks also include the Intel Santa Rosa chipset and 802.11n support.

Messaging & Telephony

■ Polycom announced the availability of its award-winning SoundStructure series, the first installed audio solutions for voice and videoconferencing applications. SoundStructure solutions are flexible and comprehensive room systems that deliver state-of-the-art performance and audio processing capabilities. Designed for installed room environments, systems integrators, and A/V professionals, the SoundStructure series are comprehensive systems featuring multiple input and output options and submix processing capabilities that simplify installation and provide flexibility for any room configuration. Several design features have been implemented to support integrator needs, including 22kHz stereo acoustic echo cancellation on all input channels, feedback elimination and advanced ambient noise cancellation on all input channels, flexible telephony options, and direct digital connection to Polycom HDXTM high-definition video systems. The Polycom SoundStructure products are available in 8-, 12-, and 16-input/output channel C (conferencing) models with two plug-in cards for single- and dual-line telephony options.

NETWORKING & VPN

■ A10 Networks announced a new 2.2 version upgrade to its ID series of network identity management appliances, including IDsentrie and IDaccess. The company says IDsentrie is the industry's only network identity management appliance that delivers integrated features that resolve IP-to-ID (IP addresses to user identity), simplifies user password management with the User Self Help Web Portal, provisions user account managements, and enhances RADIUS authentication and access control.

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Product Releases

Continued from Page 15

The all-in-one IDaccess, which is based on the IDsentrie platform and forms an authentication and guest access appliance, now supports the Safari browser and includes a subset of ID Series 2.2 enhance-



A10 NETWORKS IDSENTRIE

ments to the existing Guest Access Portal, IP-to-ID Service, and RADIUS Authentication modules.

■ **AppSense** has announced the availability of version 7.2 of its AppSense Management Suite. The company says this version advances the profile management software to allow for personalization of mandatory profiles. This capability makes up part of AppSense's User Environment Management product, which provides a predictable, secure, and responsive user experience regardless of how the application is delivered. Additionally, AppSense says this version enhances the application management capabilities of the suite by enabling applications to be trusted based on vendor certificates. When used with the AppSense Trusted Ownership model of application access management, the company says vendor certificate trusting enables flexible corporate policy enforcement.

■ ArcSight's newest network configuration and compliance manager, ArcSight Network Configuration Manager 4.2, monitors 90+ auditing requirements and provides active remediation to audit violations, which helps avoid network disruptions. ArcSight NCM utilizes a point-and-click

audit control system to give managers the ability to create and modify audit controls with speed and ease. Role-based wizards simplify network configuration and compliance management, easing the work on network administrators. ArcSight NCM also provides security toward network configuration and compliance settings.

. ■ BMC introduced its BMC ProactiveNet Analytics, a proactive utility that works in conjunction with business service management systems to quickly alert IT personnel of performance problems. BMC Proactive-Net Analytics works by examining data points from the monitored devices to determine the typical performance of each resource. When an issue arises, BMC ProactiveNet Analytics adapts to the changes to maintain availability to the priority areas, such as critical systems, service-level objectives, and end users. The new offering is fully interoperable with BMC's line of products, including BMC Performance Manager, BMC Event Manager, BMC Service Impact Manager, and BMC Remedy Service Desk.

■ IBM introduced a suite of integrated software, the DB2 Warehouse Performance Management Suite, to provide data managers with the ability to report and analyze data. Managers can better deploy and manage Business Intelligence and Data Warehouse applications, as well. The end-to-end monitoring approach displays information on the entire data cycle, from data movement processes, database and system configuration, and code quality to user and application behavior and growth processes. The DB2 Warehouse Performance Management Suite allows organizations to expand their

data warehouse environments and manage business intelligence across their networks.

■ Opalis Software released version 5.4 of its Opalis Integration Server RBA (Run Book Automation) software. Version 5.4 provides capabilities for automating and integrating IT processes within the data center, including support of SOA (serviceoriented architecture) environments. The Opalis Integration Server offers an administrator interface for the modification of preexisting workflows or creation of new workflows. Additionally, the software features integration capabilities for IT management, as well as to provision products from IT industry vendors. For customers employing ITIL, Opalis offers automated enforcement of ITIL processes and a dashboard for compliance reporting. For SOA environments, Opalis Integration Server delivers XML pro-

cessing capabilities that provide manipula-

tion and transformation of content delivered

from Web services-based SOA solutions.

■ Radware announced Radware APM (Application Performance Monitoring), an integrated solution to help find the source of performance issues that can disrupt SLA (service-level agreement) guarantees, WAN delays, and carrier performance. APM enables proactive monitoring and measurement of real-user traffic and end-to-end performance at the application level. APM can identify bottlenecks in the application delivery path, which can account for network elements, servers, applications, and databases. Administrators can measure traffic through a number of parameters, including application and network round-trip response time, SSL handshake counters, total bandwidth consumption, and incomplete application response counters. Rather than viewing simulated transactions, APM measures the actual user traffic, and it can automatically trigger alarms when SLA thresholds are not met.

■ An analytic architecture initiative for the enterprise is being touted by collaborators **SAS** and **Sun Microsystems**. The SAS Enterprise Intelligence Platform Powered by Sun's Datacenter of the Future is based on Sun hardware, software, and services and SAS' Solaris-compatible software platform. The goal of the initiative is high performance for businesses with reduced cost and complexity, the announcement says.

PHYSICAL INFRASTRUCTURE

■ Cyber Switching is targeting its PM8 Power Manager Series of intelligent power management devices at businesses that want to monitor, plan, and provision their build-

CYBER (SWITCHING ®

ings' electricity consumption. The PM8 Power Manager device is load-shedding capable and has stagger startup functionality, as well as support for remote control and individual monitoring of outlets and circuit controls. According to Cyber Switching, the PM8 Power Manager is a cost-saving device that offers an easy installation.

■ Tripp Lite has announced 50- and 100foot Plenum-Rated Category 6 Patch Cables.
These cables are ideal for installation in ceilings and air ducts, where it is necessary
according to fire codes to use plenum-rated

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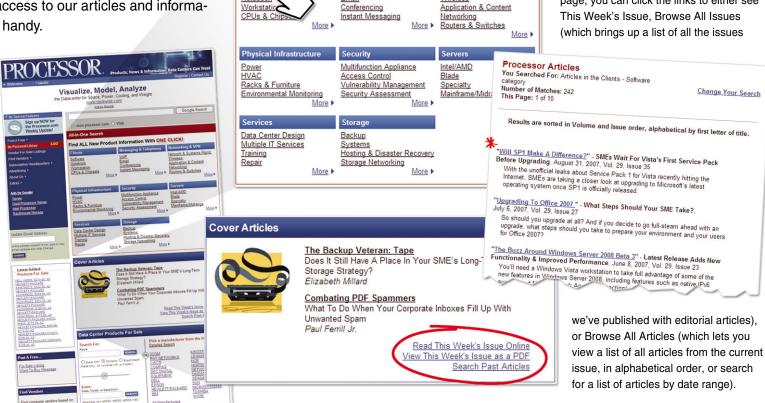
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Product Releases

Continued from Page 16 cables. The models include the Tripp Lite N201-050-GY-P and N201-100-GY-P. The products are constructed from solid conductor cable to reduce attenuation losses. The products are also preterminated with CAT 6-rated, staggered RJ-45 plugs and pliable snagless boots. Tripp Lite has tested the cables using Fluke test equipment to verify Category 6 compliance. The Tripp Lite cables come with a lifetime warranty.

SECURITY

■ Check Point announced UTM-1 Total Security appliances, which address the network security and threat management concerns of medium-sized businesses. Features of the UTM-1 Total Security platform include an application and network layer firewall, VPN, gateway antivirus and antispyware, intrusion prevention, SSL VPN, Web filtering, messaging security for email, software subscription and hardware warranty, dynamic security updates, and an intuitive user interface. UTM-1 Total Security protects resources and assets via content-based antispam, Internet protocol reputation, block/allow lists, antivirus signature scan, and zerohour outbreak protection.



■ Version 4 of GFI EndPointSecurity is now available from GFI Software. It expands administrators' control over potential data leakage over iPods, USB sticks, flash drives, PDAs, and other

portable storage devices, such as CDs, smartphones, and digital cameras. GFI EndPointSecurity 4 offers more granular control, the company says. It offers whitelists and blacklists, as well as filtering by port, file extension, device ID, device class, and so on.

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■ McAfee has introduced VirusScan for Mac v8.6, a security program that protects Macintosh end points against malware and other hazardous programs that can target personal and private data. VirusScan for Mac v8.6 can be managed through McAfee ePolicy Orchestrator for company-wide deployment, while it provides a large portfolio of security solutions that protect the computing environment at several points and from multiple threats. VirusScan for Mac v8.6 checks for more than 330,000 pieces of malware on all platforms, and it has support for signature file updates, decreasing the signature size from megabytes to kilobytes (8MB vs. 100KB).

■ SafeNet is targeting its new IPsec security package carriers that offer multimedia services, including VoIP and video, to mobile devices. The new QuickSec for IMS (IP Multimedia Subsystem) protects billing data. It's also targeting the package at OEM manufacturers that want to build IPsec-based security into their network gateways and other equipment. It offers IMS-specific programming interfaces.

STORAGE

■ Arkeia Software released version 7.0 of its backup software, Arkeia Network Backup. Designed for large enterprises, especially those with remote or branch offices, new features include Federated Data Protection architecture, seamless integration with Arkeia EdgeFort, Web 2.0-based user interface, enhanced VTL (Virtual Tape Library), and extended platform support for Novell OES 2, Mandriva 2008, Windows Server 2008, and Mac OS X Leopard.

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■ BlueArc launched the newest product in its Titan family of storage appliances, the Titan 1100 storage system, which is designed for small to medium-sized organizations. The Titan 1100 supports two-node clustering; up to 128TB of total storage; data management and virtualization software; and archiving, clustering, security, and disaster recovery capabilities. Features of the Titan 1100 include peak performance of up to 50,000 I/Ops, four Gigabit Ethernet data ports, and a modular four-blade chassis configuration.

■ Fujitsu released a line of hard drives, the PMR (Perpendicular Magnetic Recording) series. The drives are designed to use minimum amounts of energy when idling or running. The 2.5-inch drives deliver up to 320GB and are intended for use in notebook computers, compact PCs, and consumer electronics.

■ Hitachi has announced new NAS platforms for nearline applications and the midrange market. The BlueArc-powered models are the High-Performance NAS Platform 2000 Nearline and the High-Performance NAS Platform 2000. Both platforms will support NAS enhancements such as 64-bit SCSI addressing changes with larger LUN support for up to 64TB of storage, among others.

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■ iQstor announced the iQ2850 iSCSI storage system, designed to deliver automated IP SAN solutions with features such as volume management-based virtualization, snapshot, mirroring, remote replication, storage provisioning, and policy-driven capacity expansion. The iQ2850 iSCSI storage system is easily deployed within an existing network infrastructure and provides support for storage applications such as backup and disaster recovery. Each iQ2850 can support up to 15 4Gb 400GB FC drives providing 6TB of storage or 15TB using 1TB SATA drives and can scale to 96TB FC or 240TB SATA.

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■ Marathon Technologies has launched everRun CDP, software that works in conjunction with Marathon's everRun family of availability software. everRun CDP extends the protection to remote locations and decreases downtime due to system, storage, or network connection failures. everRun CDP also protects against catastrophic failure by confining and duplicating application data across any distance in real time. everRun CDP allows for uninterrupted data protection and quick data recovery from any point in time. everRun CDP also makes certain that the application data is safe, up-to-date,

■ Storwize has announced PrediSave hostbased software. This product estimates storage capacity savings possible by using a Storwize appliance. PrediSave offers ROI assessments for using a Storwize STN-6000 for storage compression. The software can analyze directories, file types, or entire systems. According to Storwize, its appliances can produce storage ratios of 65 to 90%, and Storwize PrediSave is an ideal way to predict storage savings in advance.

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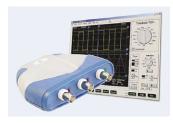
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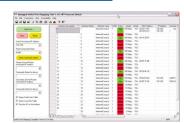
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OPINIONS

Why ROSI Isn't So ROSI After All

Anyone even loosely associated with the field of IT security should understand the concept of Return on Security Investment, or ROSI. In theory, ROSI makes it easy for IT security managers to access the dollars needed to implement the solutions necessary to protect the enterprise. In practice, it never quite works out that way.

Doing The Math

For those in need of a refresher, determining ROSI first requires that the enterprise calculates its ALE, or Annual Loss Expectancy, (the total annual dollar cost for the specific risk in question). Calculating the ALE, however, requires that we calculate the ARO, or Annual Rate of Occurrence (how many times the risk is likely to occur per year), and SLE, or Single Loss Expectancy (the dollar cost of a single occurrence of the risk in question). Laid out in a consolidated formula, we get:

ROSI = Cost of Solution / (ARO x SLE)Thus, if a risk is determined as likely to occur twice a year and carry a cost of \$10,000 per occurrence, while the solution cost to avert the risk is \$20,000, the ROSI

would be one year.

Armed with this knowledge, it should be an easy sell to upper management—in a year, the tool/process/service will have paid for itself and thereafter is money in the bank. ROSI doesn't work, though, because upper management has come to learn, just as security professionals have long known, that ALE as it stands today is at best an educated guess and at worst a blatant pack of lies.

Why ROSI Isn't

While this may sound harsh, deep down we all know it's the truth—the metrics used to calculate ALE (ARO and SLE) are not fixed, finite numbers; they're estimates (for the optimist) or wild guesses (if you're a pessimist). No one can accurately determine the likelihood that a given security threat is going to occur. Similarly, no one can categorically say what the cost of a security incident will be. At best, we can extrapolate from historical data. But let's be honest, just how much historical data is available?

To this day, not all enterprises know when they've been the target of an attack. Of those that do know, only a portion chooses to reveal this information. As such, any ARO determination that uses this historical data is going to be skewed because it is based on only a portion of the complete number of occurrences. A multiplication factor can be applied to raise the measured rate of occurrence to the "actual" rate of

occurrence, but because this factor is an estimate itself, it only compounds the problem.

Historical SLE data presents as much difficulty. Even when enterprises are aware of attacks and report their occurrence, no standard format exists for calculating their costs. Should the amount be limited simply to lost productivity, or should it include other factors? If value of lost

data is included, how is this determined? What about reputation—is it affected by the breach, and if so, how much is lost? Even if this can be quantified, what was the value of the enterprise's reputation before the attack in order that the reduced value following the attack can be determined?

Going one step further, assuming the enterprise is able to get its hands on historical data, how much of it is actually applicable to the business at hand? If it is derived primarily from financial institutions, how relevant will it be to a manufacturing company? Is data from public companies pertinent to calculations performed by private businesses? Can a small business rely on the information derived from incidents perpetrated against Fortune 1000 enterprises?

Simply put, too many questions exist in relation to ROSI for it to be of any value, and senior management knows this.

A Change For The Better

For ROSI to be of value, the guesswork needs to be taken out of it-just as the insurance industry couldn't exist without definitive actuarial tables, IT security needs fixed and finite ARO and SLE values. Further, just as it is the insurers and not the insured who create the actuarial tables, it must be the IT security industry-both vendors to collect data and independent bodies such as NIST and CSI (Computer Security Institute) to tabulate and rationalize it-not the enterprise that provides concrete ARO and SLE values. When these figures are definitive, and known to be so, enterprises will be able to calculate accurate ALE figures that will allow valid and demonstrable ROSI.

What we need to be calling for, instead of more feature-rich anti-malware packages and more powerful perimeter protection tools, is a security event database that contains actual counts of attacks (to determine valid ARO) and true, standardized costs (to calculate real SLE). The creation of such a database will require a lot of work and a lot of cooperation by all parties. Both vendors and security organizations will need to get involved. Standard reporting formats and definitive loss formulas will need to be developed. The data will need to be compiled, aggregated, and correlated and standardized outputs built.

The process cannot start, however, without us. Not just because we as IT practitioners need to demand it, but because we as

targets need to share our experiences. Only when we are willing to relate that we have been attacked and indicate what our losses are can we expect the security industry to collect the data and relay it back to us in a useable format.

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James Quin is a senior research analyst with Info-Tech Research Group. Quin has worked in the IT field for more than 10 years, specializing in IT security services. Quin holds a B.A., an Honors B.Sc., and an M.Sc. from the University of Toronto.

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PRODUCT OF THE WEEK

Wireless Monitors

The Latest Twist On Environmental Monitoring

by Sue Hildreth

INSTALLING TEMPERATURE monitors in the data center usually means stringing cables from the monitor base to the temperature probes. One probe needs one cable. If you add more probes for humidity, smoke, flood, or other environmental factors, you can wind up with an awful lot of cables.

One recently introduced product from AVTECH Software (401/847-6700; avtech .com), a maker of environmental monitors and software, aims to reduce all that cabling. The Room Alert 26W replaces cables with short-range wireless technology, which allows AVTECH sensor probes to communicate over a private, ZigBee-compatible protocol to the base unit. The monitor relies on a Wireless Sensor Hub, or WiSH, and antenna to send a signal of up to 250 feet. It can also



PRODUCT OF THE WEEK

AVTECH SOFTWARE ROOM ALERT 26W

Description: 1U, 19-inch rackmount monitor that has built-in sensors for temperature, humidity, power, and flood; includes a built-in UPS to send alerts in the event of a major power failure; provides for direct connection of digital and switch-based sensors through 26 built-in sensor ports and contact sets, as well as via AVTECH's Wireless Sensor Hubs

Interesting fact: The Room Alert 26W supports wireless transmission of sensor data for up to 1,500 feet away, saving IT staff the need to run long cables under floors or through walls.

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(401) 847-6700 avtech.com support direct connection of cables via 26 built-in sensor ports and contact sets. The WiSH unit is battery-powered and comes with a built-in temperature sensor.

Senior product specialist Michael Sigourney says that the chief purchasers of the Room Alert 26W have been mostly large and midsized enterprises attracted to its wide range of monitoring functions, as well as its wireless technology. The wireless capability reduces the amount of cables that have to be laid, making installation faster and easier.

"One of the hidden traps when you buy a monitor is that you have to run cables. So imagine you're the manager of a data center and you

have to wait until after hours to run cables through the ceiling or drill through the wall. It takes time, and you get dirty," says Sigourney. "With wireless sensors, you just hang them on a hook or set them on a rack."

For customers who want the extra monitoring support of the 26W but can't use the wireless technology—such as government agencies that are prevented by law from sending data over a wireless network—AVTECH also makes the Room Alert 26WO, for "without wireless," which omits WiSH and uses only the direct connect ports. Both versions are bundled with a license for the company's PageR Enterprise network monitoring and management software.

The Need For Monitoring

Despite the availability of high-end, multisensor monitors such as the Room Alert 26W and 26WO, many companies fail to do adequate monitoring until after there's a data center failure. Smaller companies in particular are more likely to put off buying a monitor, says Sigourney. When they do realize there's a problem, the typical response is to buy in at the lower end of the monitoring market. AVTECH's low-end monitor, the TemPageR for temperature monitoring, is a popular option for first-time customers.

"People never think about environmental monitoring until there's a disaster, and the No. 1 problem they have is simply airconditioning failure," says Sigourney. "The TemPageR is perfect for the guy who comes in Monday morning, finds the systems are down, the air conditioning has failed, and says, 'I must have something

tomorrow that tells me if we have a problem or else my job is on the line."

For data center managers with large amounts of equipment to maintain or critical applications that absolutely can't go down, the 26W and 26WO have a lot to offer. Both units are capable of monitoring a wide range



of environmental sensors they support, including temperature, humidity, power, and flood. The built-in features include a UPS in case of a major power failure, digital temperature monitoring, digital humidity monitoring, power monitoring, and a flood sensor. They also have 16 switch sensors in back and an additional six digital sensors in front. Those sensors can support any of AV-TECH's à la carte probes for smoke, sound, light, flood, motion, and airflow.

The amount of data that can be gathered and tracked with a device such as the 26W can help remote IT managers understand exactly what is happening—a flood vs. a spill or an AC outage vs. a broken server fan.

"You can learn a lot of things [by monitoring multiple factors]," notes Michael Petrino of PTS Data Center Solutions (www.ptsdcs.com). "You can track the rate of change, for instance, so if the temperature rises by 5 degrees inside of 10 minutes, you know something is happening and could set an alarm on that. You could look for floor water from leaks with spot leak sensors. It helps to get those alerts and shut services down, if need be, before they crash."

Petrino suggests deploying a monitoring system that can track conditions in each data center room, row, and cabinet cooling zone. "Once effective cooling performance is established for a particular load profile, it will change rapidly. So it's important to compile trending data for all environmental parameters for a site so that moves, adds, and changes can be executed quickly," he notes.

Petrino advises putting a temperature sensor to monitor the temperature of the

inlet air at each RLU (Rack Location Unit), plus one or two sensors per row to monitor the outlet air temperature.

A Central View Of Data

Along with monitors for temperature and humidity, Petrino suggests investing in a comprehensive IP-based monitoring package. Monitoring applications can help to centralize the data onto one interface or dashboard, as well as graphically display data trends and highlight problems.

The AVTECH PageR software, which

comes with all of the company's Room Alert products, monitors a range of devices on a TCP/IP network. It provides a Web interface that data center managers can use to check status remotely, as well as receive alerts. It provides an event console for filtering and displaying status and event information and to start applications, issue commands, or run scripts when events occur.

Besides monitoring power supply and environmental conditions, the software can also display information on the status of critical applica-

tions, remote servers, network connections, disk space, and bandwidth.

Next Release: Long-Distance Wireless

Next month, AVTECH plans to release a Wireless Sensor Hub and Powered Relay, aka WiSPR, which will extend the range of the wireless signal. Each WiSPR unit will have the ability to send information up to 350 feet. By putting four WiSPR units in a line, it's possible to get a maximum wireless signal range of 1,500 feet, although that range may be reduced if the signal has to go through walls or other obstacles.

"We're writing the software to allow each WiSPR to take a signal from another device and pass it along the chain. It will expand the distance dramatically," says Sigourney.

Room AlertW Specs

- 1U, 19-inch configuration
- Web browser interface for changing settings and viewing sensor data
- Comes with AVTECH's WiSH (Wireless Sensor Hub) for wireless transmission via ZigBee-compatible protocol
- Alerts via email, email-to-SMS, SNMP (Simple Network Management Protocol), and other methods to PCs, mobile phones, pagers, and PDAs
- Provides sensor logs and historical review of data and graphs
- Supports sensors for floods, smoke, power, humidity, motion, light, airflow, and temperature

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Defining RTI For The SME

Enhance Your Effectiveness Using Real-Time Infrastructure

by Don Reisinger

REAL-TIME INFRASTRUCTURE has historically been a vexing term. After all, real-time infrastructure, or RTI, can mean many different things to different people, and in the end, the same term can refer to the timeliness of information or how predictable data can be. But when it's all said and done, real-time infrastructure is what makes an organization become a far more effective workplace.

What Is Real-Time Infrastructure?

All told, real-time infrastructure can most easily be broken down into two major elements: timeliness and predictability. And as a real-time infrastructure becomes a fixture in the workplace, timeliness and pre-

Real-Time Infrastructure: The Definition

Real-time infrastructure is about getting data to the intended recipient in a timely manner to maximize the effectiveness of a well-run organization and, in the process, make the process more predictable.

dictability could easily become the norm on a daily basis.

Timeliness. According to Dan Hushon, senior director and chief technologist of information transformation solutions at EMC (www.emc.com), a well-known provider of IT and infrastructure solutions, real-time infrastructure is "hardware and software systems that are architected to provide guarantees as to the timeliness of operations."

But as Hushon points out, guarantees as to the timeliness of data is not a singular theory: "These guarantees can range from hard guarantees for the delivery of all operations (a challenge in most of today's operating systems) to soft real-time guarantees across a limited set of operations, which allow the system to maximize performance against a deadline."

Real-time infrastructure is simply about getting data to the intended recipient in a timely manner to maximize the effectiveness of a well-run organization, Hushon notes.

Predictability. But as David Hofert, group marketing manager for Java-embedded products and the Java Real-Time System at Sun Microsystems (www.sun.com), points out, "Real-time infrastructure is infrastructure that behaves in a predictable fashion. Predictable, in this case, means that prioritized events occur before nonprioritized

events (in priority order, of course) and that high-priority events are not delayed or otherwise interfered with by normal system functions."

And while this definition is slightly different than the timeliness opinion set forth by EMC, the end result is the same: Realtime infrastructure allows a company to know when data will reach the intended party within a reasonable amount of time to maximize corporate effectiveness and efficiency.

What Does RTI Entail?

Implementing a real-time infrastructure in the workplace is a difficult task that should be considered before moving forward. According to Hushon, "Real-time infrastructure requires a more systemic approach to design, deployment, and management—in fact, forcing substantially higher levels of integration than most traditional IT environments."

When a data center manager evaluates the results of continuous operations, she will find that the impact of traffic across the network and the impact of differential routing paths can ultimately lead to variability in the effectiveness of the entire corporate operation and increase the complexity of the organization's infrastructure while loosening controls. "But with the help of real-time infrastructure," Hushon explains, "I can see it being capable of providing a set of mechanisms in which violations can be reported in such a way that operations can be retargeted while maintaining the system-level contracts." In essence, the organization will never miss a beat.

RTI Prevalence

According to Hofert, there are two forces driving the increased adoption of real-time infrastructure in the workplace. First off, Hofert believes that the "dominant factor is the growth of service-oriented architectures

or composed services that aggregate services and information from a variety of sources to create a targeted customer view."

Hofert believes that this targeted view must come from multiple sources and return a focused frame within seconds. But without the help of real-time infrastructure, some of the components may fall to the wayside as more important elements replace those that are less important. And in the end, the ability to meet deadlines often means its removal from the service. But with the help of RTI, any and all mission-critical components can be managed and decided on in a matter of seconds.

Secondly, Hofert believes that consumer awareness of how infrastructure operates and increasing demands by the customer for better or higher levels of service is another fine reason to implement real-time infrastructure.

"Customers evaluate firms based on performance, and if they think that other firms provide better performance, they will move to that firm," Hofert says. But with the help of real-time infrastructure, clients are typically far more likely to continue doing business with a given firm.

Advantages Of RTI

Most industry experts agree that defining real-time infrastructure is the most difficult *Go to Page 26*

Advantages Of RTI

- · Mission-critical data access in seconds
- Increased corporate efficiency and effectiveness
- Increase in customer satisfaction
- Greater opportunity to compete with larger organizations
- Staying "ahead"











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CYBER (U) SWITCHING®

Murcom Gives Power To The People

Cyber Switching Provides The Right Tools

by Chris A. MacKinnon

WHEN YOU TALK to people who make IT business decisions every day, you find it a rarity when someone is thoroughly impressed with a product he has purchased. Sure, we get our hands on products that do the trick, but Murray Thibodeaux, owner and general manager of Murcom (www .murcom.com), says since he decided to go with Cyber Switching's Dualcom intelligent PDU (408/436-9830; www.cyber switching.com), he hasn't looked back.

but it didn't provide as many user accounts as the company needed; it only provided

Thibodeaux says most of his customers had only one server, so Murcom used four outlets (one assigned to each user), which left the company with four power outlets that it could not use. He says Murcom was only getting 50% usability from the device, so to support eight users, Murcom would have to buy two devices.

Thibodeaux says, "Enter Cyber Switching's Dualcom intelligent PDU." He says preferred login and password. I assigned the user to a port, and that was it."

Thibodeaux points out that it is extremely rare to find a product that is so easy to set up and use. He also says hardened passwords are another important Dualcom setup feature. "I have used other products," he says, "that don't allow ASCII characters in passwords. The use of ASCII characters in the passwords allows us to harden the access security of the device."

It is safe to say that everything has worked as planned. Thibodeaux says Murcom's first Dualcom unit has been in place for more than two years, and it has functioned perfectly. He says Cyber Switching offers the Dualcom product with an optional

The Dualcom unit has a scheduling feature that Murcom currently does not use, but Thibodeaux says it could prove to be useful to some users. Thibodeaux notes, "The scheduling allows any registered user to save a number of weekly power cycle options. This allows a user to set up a weekly power off and on cycle at any time. This could be used to turn off and on any kind of device, such as a camera, external hard drive, external tape drive system, lights, or anything else you can think of." He says although he doesn't use this feature personally, he'd like to have the capability to enter a specific calendar date instead of the day of the week.

"This way," Thibodeaux says, "I could set a device to power reset once a month instead of once a week. The new units now have a reboot option for each port. The older units just had on and off (which do the job just fine). The handy new reboot option allows users to configure their ports to delay the power down and power up function with just one button."

Any regrets? "My regret," Thibodeaux says, "is that I purchased a number of nonmanaged power strips before I realized the

> value of the remote power control of the Cyber Switching Dualcom power switch. Cyber Switching is now our remote power management device of choice."

Thibodeaux says that Cyber Switching also helps you go a

little greener. He notes, "With heightened concern about reducing greenhouse gases, the Cyber Switching Dualcom unit has not only given administrators instant control of their power outlets but has also contributed to the reduction of greenhouse gases. By not having to drive into the facility to reboot equipment, fundamentally, we burn less gas." Thibodeaux says every little bit helps.

More Power

Murcom is a midsized colocation facility (or, as it calls itself, an Internet data center). Thibodeaux says it is a headache when his technicians have to

drop what they are doing (or get out of bed) and drive to the facility to reset a customer's server. He says, "It doesn't happen very often, but sometimes servers hang after an automatic update has been performed. Simply turning the server's power off and on usually solves the customer's problems. But then the customer has to wait anywhere from 15 to 30 minutes for the reset." He says the company was in need of a reliable PDU (power distribution unit).

Before settling on Cyber Switching, however, Thibodeaux says he considered a few other products. He says, "We purchased

the main reason Murcom selected the Dualcom 8 outlet unit is because it provides 16 user accounts, and it is rack-mountable. He says, "We can have up to 16 users assigned to any combination of power outlets. Since a number of our customers have

more than one server administrator, the

extra user account capacity is extremely

useful. We don't run out of user accounts

with the Cyber Switching Dualcom units." **Easy Power**

According to Thibodeaux, implementing the PDU technology was a snap. He explains, "The setup procedure is done

amp meter function and says he purchases all of Murcom's units with this option. He says, "This lets our clients see exactly how much electricity their server or device is using. With individual and total amp usage readings, we can track our UPS load. Now it is easy to calculate if we are overloading our battery backup systems. The Dualcom can handle a 20-amp load, but we rarely go over 10 amps. It is nice to know we can connect a number of big servers to the unit without an overload."

Recommended Power

Thibodeaux says that being able to display power in real time is an option, and it is a highly desirable feature. He says because Murcom charges for power used (based on the number of amps each device uses), it can adjust billing without unplugging the equipment, inserting a power meter, taking a reading, and then reconnecting the device. He says, "Murcom customers also like it because they can verify that we are billing correctly. When customers know their power usage baseline, they can tell (by the amount of power used) if their equipment has rebooted properly. This is important to customers who choose not to subscribe to our remote KVM services."

Cyber Switching Dualcom

A PDU offering a TCP/IP and serial interfaces, as well as remote power management

"My regret is that I purchased a number of nonmanaged power strips before I realized the value of the remote power control of the Cyber Switching Dualcom power switch," says Murray Thibodeaux, owner and general manager of Murcom (www.murcom.com). "Cyber Switching is now our remote power management device of choice."

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Murcom's first Cyber Switching Dualcom unit has been in place for more than two years, and it has functioned perfectly.

remote KVM equipment, which allowed us (and our customers) to reboot the servers remotely using a keyboard. This equipment worked well as long as the computer or keyboard was not locked up. We still needed to remote power-cycle our servers, so we purchased a remote power management product." He says the product worked OK,

through a Web interface. I reset one of our desktop PCs to the same IP range as the Dualcom's default IP, opened a browser, typed in the unit's default IP address, logged on, configured the PDU, and restarted. I was done with that part in less than five minutes. Next, I used the Web interface to set each user's account with their

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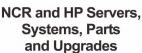
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Caching Strategies

Leveraging Caching To Improve Data Center Performance

by Sixto Ortiz Jr.

CACHING HAS ALWAYS been a tried and true technique for enhancing the performance of systems and applications. The ever-growing demands on modern data centers, however, are driving the development of memory-based caching appliances that can improve data center performance in the face of increased loads. Specifically, these new types of memory-based caching appliances can enhance the performance of NAS (network-attached storage) systems.

of storage pools to accommodate higher-performing workloads.

"These symptoms," says Orenstein, "indicate a need for enterprise performance, but not necessarily a need to replace or reconfigure storage systems." In other words, a caching solution can remedy I/O bottleneck issues and keep businesses from upgrading storage systems before their time

Mark Urban, director of product marketing at Packeteer (www.packeteer.com), says server and storage consolidation in



The iShared appliance from Packeteer (www.packeteer.com) enhances remote office connectivity to centrally located resources by providing intelligent caching that minimizes the amount of data traveling across your WAN from central to remote offices.

Finding ways to incorporate these highspeed memory resources into existing data center and network architectures is high priority for system architects who want to enhance their caching strategies by exploiting new technologies.

The Caching Advantage

Before exploring the possibility of using caching appliances, users should determine whether there is a need for them in the first place. So, enterprises can take advantage of these caching appliances by first identifying whether they have an I/O (input/output) constrained environment, says Gary Orenstein, vice president of marketing for Gear6 (www.gear6.com), a provider of caching appliances.

The typical signs of I/O constraints, adds Orenstein, include application delays and brownouts, coupled with low CPU utilization rates on application servers and high CPU utilization rates on storage systems. In other words, servers are underutilized, while storage systems struggle to deliver data. Other signs, he adds, include frequent data migrations and reconfiguring

centralized data centers, while enhancing security and data integrity, can cause performance problems for remote offices. In these situations, he adds, caching can dynamically shift or keep copies of the bulk data closer to the users who need to work on it.

"This means IT can extend the protection and security characteristics of the data center out to the remote offices without the performance penalty," says Urban.

And, it's also important to note that caching appliances can help a business maximize the performance of its existing assets. Tony Asaro, senior analyst with ESG (the Enterprise Strategy Group), says if a business requires high-performance NAS and current solutions do not sufficiently provide that need, then a shared cache appliance can solve a major performance/business problem without the need for a huge capital investment.

Before You Cache... Considerations

Gear6's Orenstein says administrators should keep in mind that the introduction of caching appliances represents a fundamental shift between splitting I/O performance (for example, serving data from storage systems) and I/O persistence (for example, saving data in storage systems). Historically, he adds, these two functions have been inextricably linked, leaving administrators in need of frequent data migration and movement due to performance requirements. With caching appliances, administrators can now add performance to existing configurations without having to change their storage systems.

In other words, memory-based storage caching systems can extend the useful life of storage systems by eliminating the need to move data around in order to enhance performance and meet higher data demand.

Another consideration to keep in mind, says Orenstein, is the fact that caching appliances are "intelligent" and know when to make frequently accessed data readily available in the cache and when to replace/refresh old data in the cache with new data required by resources and/or applications. This intelligence is required to ensure that only the data that's required is the data stored in the cache.

An important consideration to keep in mind, says Packeteer's Urban, is the security of cached data transmitted or stored by the appliance. He points out that security is huge, so any caching appliances should not compromise (and this goes for Windows shops) Windows-based security.

"Some caching appliances," says Urban, "fake or otherwise, compromise elements of your data center security model or don't encrypt the cache as it moves across the network or when it's at rest in the appliance." In fact, adds Urban, some caching appliances even force administrators to disable some Microsoft security features.

"When you're choosing a cache/accelerator appliance," notes Urban, "make sure you're not trading performance for security."

But, says Gear6's Orenstein, persistent storage systems implement their own security mechanisms, and a caching appliance mirrors those mechanisms as a proxy. So if one application server is not authorized to see a certain file, he adds, the caching appliance will implement the same security mechanisms as a proxy, prohibiting access.

The Future Of Caching

Caching is a tried and true technique for adding performance to all computing infrastructures, says Gear6's Orenstein. After all, it only makes sense to keep copies of frequently used data readily available for use by servers and applications.

But, Orenstein points out, traditionally, caching could only be selectively added to individual servers and/or storage systems.

These caches were limited in size and scale and were not easily shareable with other data center resources. With memory-based caching storage appliances, a centralized storage cache can be shared as a network resource, providing improved performance and without requiring changes to server and storage infrastructures, he adds.

In other words, these appliances essentially compose a readily available and shared pool of memory-based cache available to storage and/or server systems that might require it.

And, Packeteer's Urban notes, caching and acceleration only make up part of the big picture because they only help with file and bulk data performance. Other optimization technologies are needed to enhance the performance of applications such as Voice over IP, ERP systems, Citrix, and services such as printing and patching that are required to be delivered to remote offices.

Cache Performance Gains

Treating cache as a centrally available network resource, just like storage capacity or servers, is yet another manifestation of utility computing, where computing resources



Gear6's CACHEfx appliances (www.gear6.com) connect to your network and scale up as your needs change by using high-speed memory to deliver requests and improve I/O operations performance.

are treated as readily available pools of performance available to applications, servers, etc. Data center and storage administrators facing limited budget resources are always looking for ways to protect their investments and get longer useful life from their assets without sacrificing performance. Memory-based storage caching approaches can help administrators balance the need for performance with the need for keeping IT budgets under control.



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Moving Toward 802.11n

Is The Latest Wi-Fi Technology Mature Enough For Production & How Best Can Enterprises Prepare For An Eventual Migration?

by Kurt Marko

THE TECHNOLOGY landscape is littered with presumptively revolutionary products that seem stuck on an endless development treadmill. (Remember Windows Vista, aka Longhorn?) The next upgrade to the Wi-Fi protocol is another in this frustratingly long line of technology promises. 802.11n is the latest in a set of wireless standards from the IEEE. Development on 11n started in early 2004, and after years of fits and starts, the

802.11n Planning Recommendations

Paul DeBeasi at the Burton Group says that while 802.11n is a more complex WLAN technology than its predecessors, it has reached a level of maturity where it's now appropriate for enterprise deployments with careful design. The following are recommendations to follow when planning an 11n installation.

- Only buy products that are WFA [Wi-Fi Alliance]-certified
- Consider draft-N, WFA-certified products for production
- Deploy 802.11n in the 5GHz band
- Use dual-band 802.11n stations
- Use dual-band, dual-radio 802.11n APs (access points)
- Make sure that Gigabit Ethernet is available for AP backhaul
- Prepare for 802.11n APs that may exceed the PoE budget
- Avoid mixing 802.11b and 802.11n stations on the same 2.4GHz band
- Use 40MHz channel bonding

Source: Burton Group

standard's second draft—the first complete and stable enough upon which to build products-received final approval in March. Subsequently, numerous so-called draft-N products have been released, and while changes in the final standard are possible, the Wi-Fi Alliance has undertaken a compatibility-testing program that seeks to mitigate uncertainty about future interoperability. According to Chris Silva of Forrester Research, "Infrastructure vendors are reluctant to commit to claims of 100% compatibility of their 802.11n hardware, but enterprises need only expect a software update at most for any certified pre-11nbased hardware."

Interest in 11n has been keen due to promises of substantial throughput improvements. Paul DeBeasi at the Burton Group notes that "802.11n is expected to provide at least 100Mbps Internet Protocol (IP) packet throughput and up to twice the range compared to 802.11g. The increase in throughput will enable enterprises to use wireless for more data-intensive applications." Thus, it's not surprising that a recent estimate by the Dell'Oro Group predicts 11n products to compose more than half of the Wi-Fi market by 2009. These developments have led many IT managers to wonder when to pull the trigger on 11n deployments and how best to migrate to the new standard.

Vendor Support & Relative Pricing

There are five major WLAN infrastructure vendors offering 11n products: Aruba Networks (www.arubanetworks.com), Cisco Systems (www.cisco.com), Colubris Networks (www.colubris.com), Meru Networks (www.merunetworks.com), and Trapeze Networks (www.trapezenetworks.com). Experts agree this list will certainly grow during the next year. Like any new

technology, 11n enjoys a substantial price premium over its predecessors—estimated at 1.5 to three times higher than 11g products by Silva. He expects smaller vendors, in an effort to win market share, will price their products most aggressively and advises that as companies move to 11n, "it may also be a wise time to re-evaluate infrastructure vendors."

Integration Strategy For Existing Wi-Fi

A key concern for businesses with existing 11b or 11g infrastructure is how best to integrate 11n into the legacy environment. It's important to understand that unlike these earlier standards, which only operated in the 2.4GHz band, or the seldom-seen 11a standard, which ran exclusively in the 5GHz band, 11n can run in either. According to DeBeasi, enterprise WLAN vendors are featuring so-called dual-radio designs that can run in both bands simultaneously. Thus companies wishing to deploy a single infrastructure for both legacy and 11n clients can service 11b and 11g clients via the 2.4GHz radio while reserving the 5GHz radio for 11n. DeBeasi highlights the importance of using the 5GHz band over 2.4GHz, noting that it has many more channels, is less crowded, and is thus subject to less interference.

Silva adds, "It is also possible to deploy single-radio 802.11n access points as an overlay to existing 802.11g infrastructure. This hybrid approach is ideal for enterprises wishing to preserve the speed and range benefits of the 802.11n deployment and relegate other, slower 802.11g devices to the alternate WLAN." The hybrid approach is also attractive because many handheld devices, such as Wi-Fi phones and PDAs, will likely not support 11n anytime soon due to the higher power drain of current 11n chipsets.

Infrastructure Strategy— To Gig Or Not To Gig?

A critical question for many IT managers is whether to use Gigabit Ethernet for backhauls from 11n APs (access points). Silva believes that 11n won't necessarily require GbE "because initial use will not likely require the access point's full throughput," although he does recommend moving to GbE over time, as traffic growth will eventually outstrip a 100Mbps pipe. Burton's DeBeasi is more adamant about going with GbE immediately, noting that 11n's data rate, particularly when used with the doublewide, 40MHz channels, easily exceeds that of fast Ethernet.

Both DeBeasi and Silva remind WLAN designers not to overlook power provisioning. Many wireless deployments use 802.3af to provide electrical Power over Ethernet to far-flung APs and thus eliminate additional cable run; however, current 11n APs will exceed PoE's specs, pulling 18 to 21W when fully loaded against PoE's maximum of about 13W. DeBeasi doesn't feel this is a long-term problem because next-generation 11n chipsets are likely to draw substantially less power, while current 11n APs will automatically shut down some of their MIMO antennas to lower power if needed.

Looking Ahead

A raft of so-called draft-N wireless products hit the market this fall, and more are due early next year. The throughput and range improvements of 802.11n over its predecessors are compelling reasons for enterprises to consider migrating their infrastructure soon. According to DeBeasi, "The risk that draft-N, WFA [Wi-Fi Alliance]-certified products will be incompatible with final 802.11n, WFA-certified (i.e., second-phase) products is low, and enterprises should consider using [these] products for large-scale deployment of production networks."

Defining RTI For The SME

Continued from Page 23

element of understanding and implementing RTI into the workplace. But once a data center manager evaluates the corporate need for real-time infrastructure, he should be aware that there are a host of advantages to implementing a system that could sway him in that direction.

Ultimately, real-time infrastructure will help data center managers ensure that their IT physical plants can "triage" the workloads to guarantee the performance of critical tasks. "We are finding that enterprises are beginning to look at their IT physical plants as 'finite pools' rather than 'infinitely expandable domains," Hushon explains. "Consolidation/virtualization have, in some cases, challenged enterprises to find ways of colocating applications/services/data, but when push comes to shove, critical applications remain in isolation—isolation ensuring that external factors have a minimal impact on system performance."

But perhaps most importantly, real-time infrastructure, while costly to implement, can usher in the opportunity for greater revenue potential, as increased functionality and a higher level of predictability ultimately lead to a more satisfied client base and a better-run organization.

Impact On SMEs

According to Hushon, "Many midsized enterprises have lacked the 'extra' capital to build oversized pools of assets and have therefore not been able to successfully consolidate/virtualize their infrastructure." But, he notes, the emergence of real-time

infrastructure will allow SMEs to better prioritize their finite assets and balance risk and reward much more effectively.

Besides that, SMEs can expect an increase in data predictability and timeliness, which should ultimately lead to their ability to more effectively compete with larger organizations and satisfy customers, to boot.

Real-time infrastructure is an immensely important development in the IT industry. And although it will take time and capital to implement, the end result should increase an organization's effectiveness and ultimately lead to a positive experience for both the company and employees.

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WHAT'S HAPPENING

Keep An Eye On Your Network

Mazu Offers Profiler For Network Behavior Analysis

by Julie Sartain

In TODAY'S BUSY corporate environments, one of the greatest problems (and most recent realities) is the issue that revolves around a network-dependent world. Users will no longer tolerate the network being down. They can't, because without the network, the work stops.

The Challenges

"Our total reliance on network availability has shifted the problem," says Charles Kaplan, chief technology strategist at Mazu Networks (www.mazunetworks.com), head-quartered in Cambridge, Mass. "And our network behavior analysis (NBA) products have shifted along with it. Secure/insecure and up/down are the old metrics. Today's IT is being measured based on application availability, performance, and end-user experience. This creates a very new set of challenges that Mazu Profiler addresses."

Along that road, Mazu Networks has faced many challenges, notes Kaplan. One recent challenge the company solved was related to the differences in how security teams vs. WAN teams view the data. Security teams are, typically, dealing with two or three systems and a timeframe of less than one hour.

For example, notes Kaplan, a security team may say, "Tell me everything that

happened in the 10 minutes surrounding system A attacking host B." WAN teams, on the other hand, are often concerned with a router interface over the course of a year, such as the capacity planning for a link based on the past year's data. Originally, Mazu struggled with generating this yearlong query, as it was looking to provide info with 100% flow-level accuracy. Discussions with WAN administrators later revealed that daily or even weekly level accuracy was more than sufficient for planning purposes and that a speed/accuracy trade-off was more than acceptable.

The Products

Mazu Networks offers NBA products that enable IT organizations to manage, secure, and optimize the availability and performance of business services. NBA systems provide a new way of looking at the IT infrastructure by analyzing network traffic to provide valuable information about the interactions of and dependencies between users, applications, and systems, adds Kaplan.

IT personnel and management use this critical information to alert them to meaningful changes and inform infrastructure optimization initiatives, enabling them to evolve the IT infrastructure to keep pace with the business. Mazu Profiler is the only flow product capable of retaining and reporting on every flow that occurred or intelligently

summarizing data for faster performance with less accuracy where that is acceptable.

How It Works

According to Kaplan, Mazu Profiler provides analytics and presentation customized to the specific needs and workflows of security, applications, and network teams. Each of these users has a different workflow (work process that Profiler helps automate), and it has a different perspective and information need, even when reviewing the same piece of

the IT infrastructure. Building these "use cases" was challenging and involved considerable effort in prototyping and testing with end users.

Profiler observes actual traffic across the network to compile a view of users' interactions with systems and applications. Mazu constructs a holistic model that's centered around the total information flow between individual users and systems or groups of users or systems. It identifies actual users and apps using advanced technology and interfaces to other management systems. Traditional network analysis tools rely on proxies for users (such as IP addresses) and applications (such as TCP ports), which are increasingly unreliable in IT environments. Furthermore, these other products were designed to solve problems concerning individual components of the network and, therefore, do not provide accurate descriptions of user dependencies and usage patterns, says Kaplan.

The Technology—Unique Differentiators

"User identification and application fingerprinting is one of Mazu's unique technological differentiators," says Kaplan. "In a simpler network, managing ports, protocols, and IP addresses was a plausible approach to performance and security management. But today's virtualization and optimization technologies obscure the relationships between infrastructure, users, and applications."

Business requirements necessitate actual user and application visibility, both end-to-end and across core network segments. Mazu Profiler provides this visibility by combining network flow data with Layer 7 application

fingerprinting and user identity information, showing their dependencies and usage. With Profiler, users can effectively enforce application usage policies and satisfy regulations.

In addition, notes Kaplan, the practice of applying static thresholds to protocols across segments of a network is no longer practical in today's complex environments. Profiler understands the typical interactions between users, applications, and systems across the enterprise's infrastructure. Profiler's analytics identify abnormal activities and provide root cause and impact analyses so users can resolve issues before they affect business. Users benefit from proactive problem resolution and reduced meantime to repair.

Kaplan also mentions that every aspect of IT is dedicated to providing users with secure, robust access to business services, and more than ever, business services management requires network, security, and applications teams to have a common understanding of how these services are delivered. Mazu Profiler provides the analytics and presentation tailored to the needs and workflows of a company's security, applications, and networks. Users can improve the availability, security, and performance of business services while improving productivity. And, it interoperates intelligently with other systems; for example, it learns from other systems, such as identity management systems and traffic accelerators, to provide realworld business context.

Costs & Future Plans

"Mazu Profiler is a scalable solution," says Kaplan. "Customer installations range from entry-level configurations under \$50,000 to global installations in excess of \$500,000. The configuration scales by the number of user transactions the customer is observing. This can result in additional database modules or data collectors required to meet specific global geographic concerns."

For the near future, Mazu Networks is focused on expanding the workflow and "use cases" to meet the needs of major enterprises as they implement WAN optimization schemes and/or perform data center moves and consolidations.

THREE QUESTIONS

Integrien Avoids, Reduces Downtime

Alive Combines, Analyzes Management Info From Multiple Systems, Levels

by Daniel P. Dern

Integrien was Founded in 2001 by a group of executives and engineers with career-long backgrounds in high-availability enterprise networks, security, and application monitoring to address the management challenge posed by the growing complexity in data centers, according to Integrien Co-founder and CTO Mazda Marvasti. Prior to co-founding Integrien (www.integrien.com), Marvasti was CTO at LowerMyBills.com and before that was executive director of technology at online marketing firm USWeb.

Today, Integrien's Alive intelligent systems management software is used by companies in finance, health care, online services, telecom, and other industries to identify potential or occurring problems in their mission-critical applications, enabling them to achieve higher-quality business operations that are more efficient and continuously available at required service levels.

■ What are the biggest IT-related issues facing today's small to midsized enterprise?

"IT operations are growing increasingly complex," says Marvasti. "Reasons include new technologies like service-oriented architectures (SOA), multitier applications, and virtualization and consolidation, as well as applications that have many device and application components with complex interrelationships."

For example, says Marvasti, "a customer-facing Web application like a banking transaction relies on a series of network equipment, a Web server, a database back end, storage devices, plus Web apps."

The consequences for problem resolution, explains Marvasti, "are that the manual processes like correlation, rule-writing, and threshold setting, which are associated with traditional technology, are becoming problematic. Identifying a problem, figuring out where it's coming from (what component) and what to do becomes a time-consuming problem. Some problems need only five to 10 minutes, but some take 24 to 48 hours. It averages out to six hours." Also, Marvasti points out, IT staff expertise is

usually specific to parts of an infrastructure and its processors, while indicators of problems may be manifesting elsewhere in an application, so companies need "integrity management" to identify, predict, and prevent problems.

■ What should *Processor* readers know about your company's products?

Integrity Alive helps IT reduce problem resolution time and minimize/avoid application downtime by applying real-time analytics to monitoring data from a company's existing management tools.

"IT is inundated with metrics and alerts, so many that IT can't examine them all and can't easily tell which ones should be acted on," says Marvasti. "And if you're monitoring on a silo basis, the correlation between silos is missing."

Integrity Alive, says Marvasti, "does real-time automated analysis and correlation of all your monitoring data and generates a smaller number of alerts which are actionable. This lets IT be more proactive."

For example, says Marvasti, with traditional "silo" monitoring systems, when IT receives an alert, the experts in

several different IT specialties may have to confer by phone, "to see whose problem it isn't." By contrast, a predictive alert from the Alive system will do several things, including provide a prediction of what will happen based on previous patterns (such as an 80% probability that response time will degrade within 15 minutes in an application), note the impact (for example, to your banking transactions), identify the source, and give probabilistic assessment of which device is the problem.

"It's what IT doesn't hear that they like," notes Marvasti. "Instead of all the false alerts that IT has to figure out what they are, the 'silence' is deafening. . . . IT gets alerts they can do something about, rather than something they have to make decisions about."

■ What makes your company unique?

"Integrien is a mathematics expertisedense company," says Marvasti. "I have a Ph.D. in aerospace engineering, which is basically all math-related. A quarter of the employees are Ph.D.s using math to solve IT problems. We are applying a lot of complex mathematical techniques so we can take the complexity out of IT management."





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CrystalView™

Extends keyboard, video, mouse, audio and serial up to 1000 ft

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CrysrtalView™ Pro

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- Supports DVI video resolutions up to 1920 x 1200
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- Fully automatic KVM sharing



ViewLink™

Extends keyboard, video, & mouse up to 1000' over CATx

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